

10/540,075

=> d his ful

(FILE 'REGISTRY' ENTERED AT 17:08:17 ON 13 MAR 2007)

L1 STR
L6 2120 SEA SSS FUL L1
L10 STR
L11 1 SEA SSS SAM L10
L12 29 SEA SUB=L6 SSS FUL L10

FILE 'HCAPLUS' ENTERED AT 17:51:31 ON 13 MAR 2007

L13 2 SEA ABB=ON PLU=ON L12
D STAT QUE L13
D IBIB ABS HITSTR L13 1-2
L14 6 SEA ABB=ON PLU=ON "ROTTLANDER MARIO"/AU
L15 23 SEA ABB=ON PLU=ON ("RITZEN A"/AU OR "RITZEN ANDREAS"/AU)
L16 8 SEA ABB=ON PLU=ON "NORGAARD M"/AU OR ("NORGAARD MORTEN"/AU
OR "NORGAARD MORTEN BANG"/AU)
L17 6 SEA ABB=ON PLU=ON "KHANZHIN NIKOLAY"/AU
L18 14 SEA ABB=ON PLU=ON ("TORNOE C"/AU OR "TORNOE C W"/AU) OR
("TORNOE CHRISTIAN"/AU OR "TORNOE CHRISTIAN W"/AU)
L19 53 SEA ABB=ON PLU=ON L14 OR L15 OR L16 OR L17 OR L18
L20 52 SEA ABB=ON PLU=ON L19 NOT L13
D STAT QUE L20
D IBIB ABS HITSTR L20 1-52

FILE HCAPLUS

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FILE COVERS 1907 - 13 Mar 2007 VOL 146 ISS 12
FILE LAST UPDATED: 12 Mar 2007 (20070312/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 12 MAR 2007 HIGHEST RN 926069-79-6
DICTIONARY FILE UPDATES: 12 MAR 2007 HIGHEST RN 926069-79-6

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TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

FILE BEILSTEIN

FILE LAST UPDATED ON JANUARY 10, 2007

FILE COVERS 1771 TO 2006.

FILE CONTAINS 9,780,003 SUBSTANCES

>>> PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For more detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. *
* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE *
* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE *
* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. *
* FOR PRICE INFORMATION SEE HELP COST *

NEW
* PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE
SEARCHED, SELECTED AND TRANSFERRED.
* NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES,
ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A
COMPOUND AT A GLANCE.

=>

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 17:51:31 ON 13 MAR 2007

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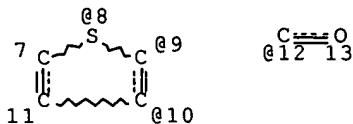
FILE COVERS 1907 - 13 Mar 2007 VOL 146 ISS 12
FILE LAST UPDATED: 12 Mar 2007 (20070312/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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=>

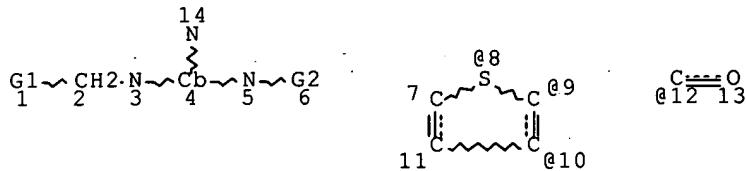
=> d stat que 113
L1 STR



VAR G1=8/9/10
VAR G2=12/SO2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
L6 2120 SEA FILE=REGISTRY SSS FUL L1
L10 STR



VAR G1=8/9/10
VAR G2=12/SO2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT IS MCY AT 4
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 7
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE
L12 29 SEA FILE=REGISTRY SUB=L6 SSS FUL L10
L13 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L12

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=>

=> d ibib abs hitstr 113 1-2

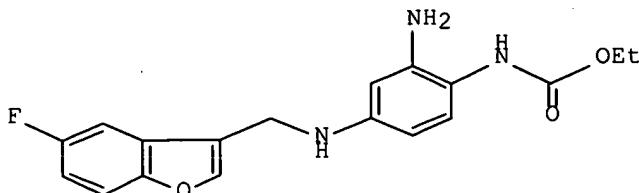
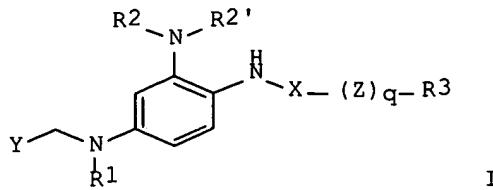
L13 ANSWER 1 OF 2 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:566591 HCPLUS Full-text
DOCUMENT NUMBER: 141:123466
TITLE: Preparation of 1,2,4-triaminobenzene derivatives
useful for treating disorders of the central nervous
system
INVENTOR(S): Rottlaender, Mario; Ritzen, Andreas; Bang, Norgaard
Morten; Khanzhin, Nikolay; Wenzel, Tornoe Christian
PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.
SOURCE: PCT Int. Appl., 84 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1 *APP*

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|------------------|------------|
| WO 2004058739 | A1 | 20040715 | WO 2003-DK906 | 20031218 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2511502 | A1 | 20040715 | CA 2003-2511502 | 20031218 |
| AU 2003287922 | A1 | 20040722 | AU 2003-287922 | 20031218 |
| EP 1578740 | A1 | 20050928 | EP 2003-779762 | 20031218 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| BR 2003017748 | A | 20051122 | BR 2003-17748 | 20031218 |
| CN 1732162 | A | 20060208 | CN 2003-80107695 | 20031218 |
| JP 2006515300 | T | 20060525 | JP 2004-562504 | 20031218 |
| US 2006014822 | A1 | 20060119 | US 2005-540075 | 20050622 |
| NO 2005003612 | A | 20050923 | NO 2005-3612 | 20050725 |
| PRIORITY APPLN. INFO.: | | | DK 2002-2012 | A 20021227 |
| | | | US 2002-436697P | P 20021227 |
| | | | WO 2003-DK906 | W 20031218 |

OTHER SOURCE(S): MARPAT 141:123466

GI



AB Title compds. I [R1 = H, alk(en/yn)yl, cycloalk(en)yl, etc.; R2-2' = H, alk(en/yn)yl, aryl, etc.; R3 = H, alk(en/yn)yl, cycloalk(en)yl, aryl, etc.; X = CO, SO₂; Z = O, amino; q = 0-1; Y = (benzo)heteroaryl] are prepared. For instance, (4-amino-2-nitrophenyl)carbamic acid Et ester is reductively alkylated with 5-Fluorobenzofuran-3-carboxaldehyde (i. o-xylene, Amberlite IRC-84, reflux, 5 h; ii. dioxane/MeOH, NaBH₄) and the product reduced (EtOH/HCl, Fe, 60°, 20 min) to give II. I are useful in the treatment of diseases associated with the KCNQ family potassium channels; example compds. have EC₅₀ < 20,000 nM for the KCNQ2 channel.

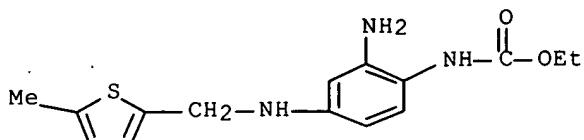
IT 721943-34-6P, [2-Amino-4-[(5-methylthiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester dihydrochloride
 721943-35-7P, [2-Amino-4-[(3-methylthiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester dihydrochloride
 721943-36-8P, [2-Amino-4-[(thiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester dihydrochloride
 721943-37-9P, [2-Amino-4-[(thiophene-3-ylmethyl)amino]phenyl]carbamic acid ethyl ester dihydrochloride
 721943-39-1P, [2-Amino-4-[(4-(4-chlorobenzenesulfonyl)-3-methylthiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester
 721943-41-5P, [2-Amino-4-[(3-chlorothiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester 721943-42-6P,
 [2-Amino-4-[(4-bromo-3-methoxythiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester 721943-46-0P 721943-47-1P
 721943-48-2P 721943-49-3P, [2-Amino-4-[(5-fluorothiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester
 721943-50-6P 721943-51-7P, [2-Amino-4-[(5-bromothiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester 721943-52-8P,
 [2-Amino-4-[(4-bromothiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester 721943-53-9P, [2-Amino-4-[(5-ethylthiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester 721943-55-1P,
 [2-Amino-4-[(5-phenylthiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester 721943-58-4P, N-[2-Amino-4-[(5-chlorothiophene-2-ylmethyl)amino]phenyl]-2-(4-fluorophenyl)acetamide 721943-59-5P,
 N-[2-Amino-4-[(5-chlorothiophene-2-ylmethyl)amino]phenyl]-3,3-dimethylbutyramide 721943-60-8P, [2-Amino-4-[(5-methylthiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester 721943-61-9P,
 [2-Amino-4-[(3-methylthiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester 721943-62-0P, [2-Amino-4-[(thiophene-2-ylmethyl)amino]phenyl]carbamic acid ethyl ester 721943-63-1P,

[2-Amino-4-[(thiophene-3-ylmethyl)amino]phenyl]carbamic acid ethyl ester
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)

(preparation of 1,2,4-triaminobenzene derivs. useful for treating disorders
of central nervous system)

RN 721943-34-6 HCPLUS

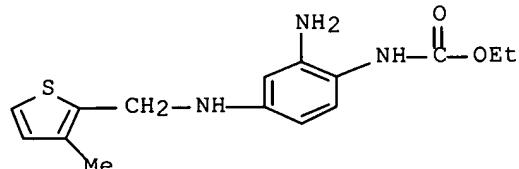
CN Carbamic acid, [2-amino-4-[(5-methyl-2-thienyl)methyl]amino]phenyl-,
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●2 HCl

RN 721943-35-7 HCPLUS

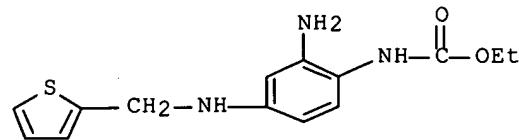
CN Carbamic acid, [2-amino-4-[(3-methyl-2-thienyl)methyl]amino]phenyl-,
ethyl ester, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 721943-36-8 HCPLUS

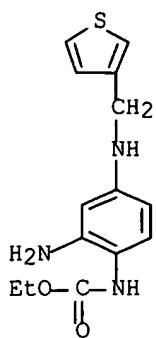
CN Carbamic acid, [2-amino-4-[(2-thienylmethyl)amino]phenyl]-, ethyl ester,
dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 721943-37-9 HCPLUS

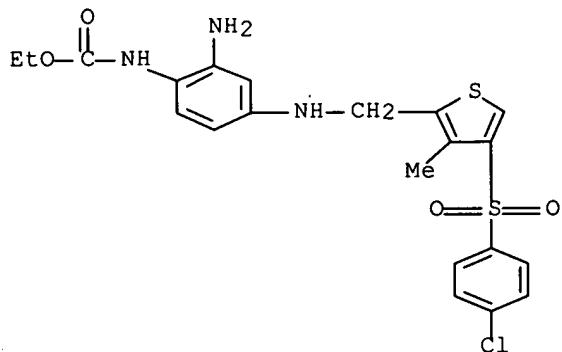
CN Carbamic acid, [2-amino-4-[(3-thienylmethyl)amino]phenyl]-, ethyl ester,
dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

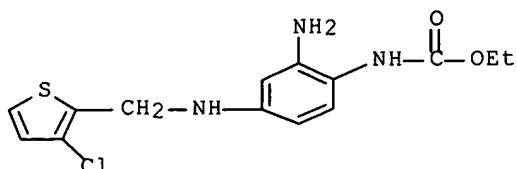
RN 721943-39-1 HCPLUS

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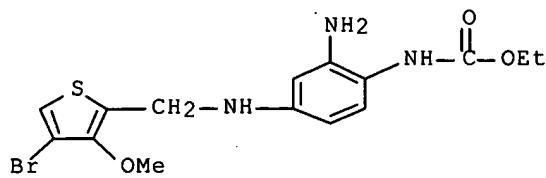
RN 721943-41-5 HCPLUS

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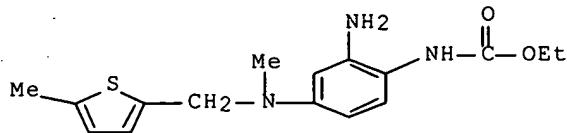
RN 721943-42-6 HCPLUS

CN Carbamic acid, [2-amino-4-[(4-bromo-3-methoxy-2-thienyl)methyl]amino]phenyl]-, ethyl ester (9CI) (CA INDEX NAME)



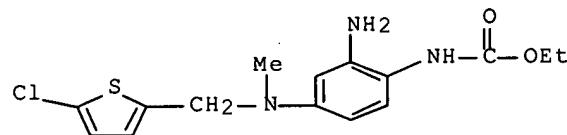
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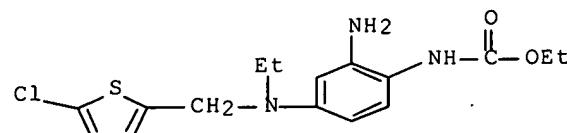
RN 721943-47-1 HCAPLUS

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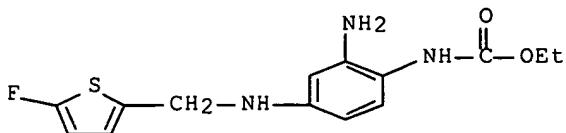
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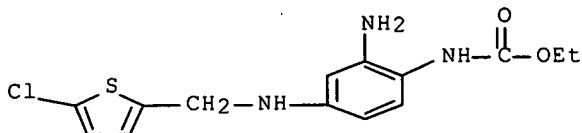
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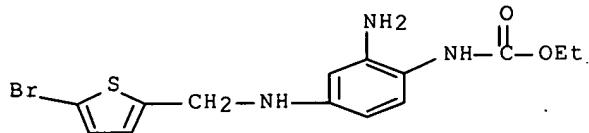
RN 721943-50-6 HCAPLUS

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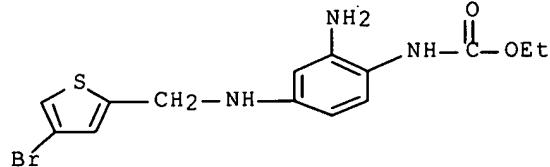
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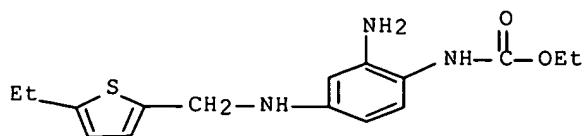
RN 721943-52-8 HCAPLUS

CN Carbamic acid, [2-amino-4-[(4-bromo-2-thienyl)methyl]amino]phenyl]-, ethyl ester (9CI) (CA INDEX NAME)

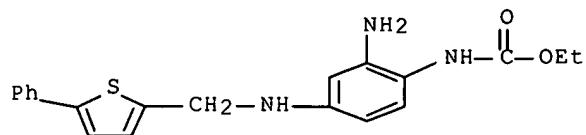


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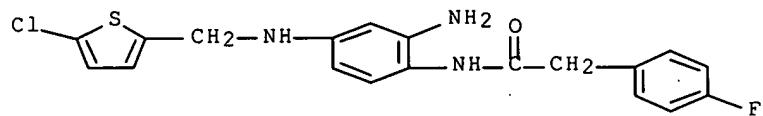
CN Carbamic acid, [2-amino-4-[(5-ethyl-2-thienyl)methyl]amino]phenyl]-, ethyl ester (9CI) (CA INDEX NAME)



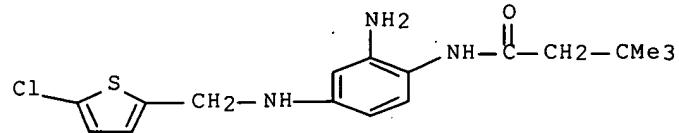
RN 721943-55-1 HCAPLUS
 CN Carbamic acid, [2-amino-4-[(5-phenyl-2-thienyl)methyl]amino]phenyl-, ethyl ester (9CI) (CA INDEX NAME)



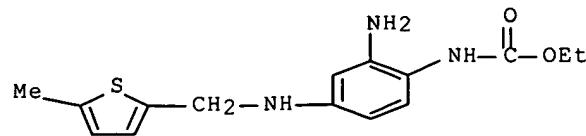
RN 721943-58-4 HCAPLUS
 CN Benzeneacetamide, N-[2-amino-4-[(5-chloro-2-thienyl)methyl]amino]phenyl]-4-fluoro- (9CI) (CA INDEX NAME)



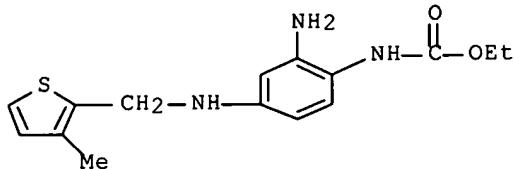
RN 721943-59-5 HCAPLUS
 CN Butanamide, N-[2-amino-4-[(5-chloro-2-thienyl)methyl]amino]phenyl]-3,3-dimethyl- (9CI) (CA INDEX NAME)



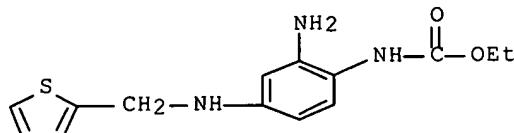
RN 721943-60-8 HCAPLUS
 CN Carbamic acid, [2-amino-4-[(5-methyl-2-thienyl)methyl]amino]phenyl-, ethyl ester (9CI) (CA INDEX NAME)



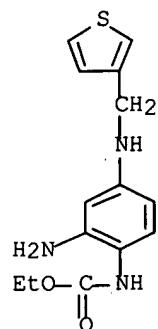
RN 721943-61-9 HCAPLUS
CN Carbamic acid, [2-amino-4-[(3-methyl-2-thienyl)methyl]amino]phenyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 721943-62-0 HCAPLUS
CN Carbamic acid, [2-amino-4-[(2-thienylmethyl)amino]phenyl]-, ethyl ester (9CI) (CA INDEX NAME)



RN 721943-63-1 HCAPLUS
CN Carbamic acid, [2-amino-4-[(3-thienylmethyl)amino]phenyl]-, ethyl ester (9CI) (CA INDEX NAME)



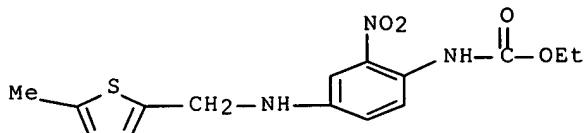
IT 721943-21-1P, [4-[(5-Methylthiophene-2-ylmethyl)amino]-2-nitrophenyl]carbamic acid ethyl ester 721943-22-2P, [4-[(3-Methylthiophene-2-ylmethyl)amino]-2-nitrophenyl]carbamic acid ethyl ester 721943-23-3P, [4-[(Thiophene-2-ylmethyl)amino]-2-nitrophenyl]carbamic acid ethyl ester 721943-24-4P, [4-[(Thiophene-3-ylmethyl)amino]-2-nitrophenyl]carbamic acid ethyl ester 721943-29-9P, N-[4-[(5-Chlorothiophene-2-ylmethyl)amino]-2-nitrophenyl]-2-(4-fluorophenyl)acetamide 721943-31-3P, N-[4-[(5-Chlorothiophene-2-ylmethyl)amino]-2-nitrophenyl]-3,3-dimethylbutyramide
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation of 1,2,4-triaminobenzene derivs. useful for treating disorders
of central nervous system)

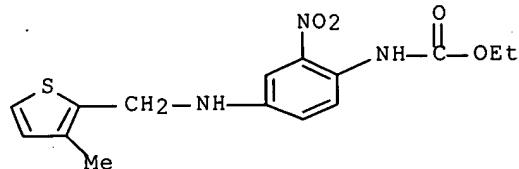
RN 721943-21-1 HCPLUS

CN Carbamic acid, [4-[(5-methyl-2-thienyl)methyl]amino]-2-nitrophenyl-,
ethyl ester (9CI) (CA INDEX NAME)



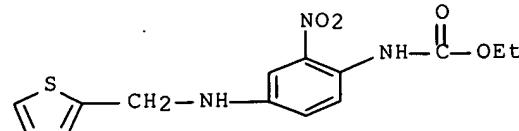
RN 721943-22-2 HCPLUS

CN Carbamic acid, [4-[(3-methyl-2-thienyl)methyl]amino]-2-nitrophenyl-,
ethyl ester (9CI) (CA INDEX NAME)



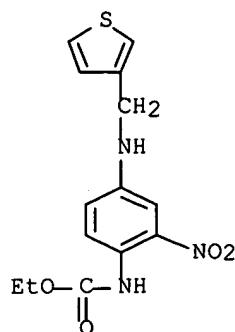
RN 721943-23-3 HCPLUS

CN Carbamic acid, [2-nitro-4-[(2-thienylmethyl)amino]phenyl-, ethyl ester
(9CI) (CA INDEX NAME)

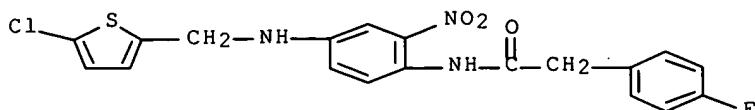


RN 721943-24-4 HCPLUS

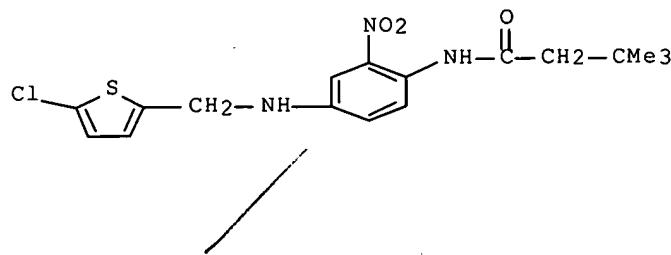
CN Carbamic acid, [2-nitro-4-[(3-thienylmethyl)amino]phenyl-, ethyl ester
(9CI) (CA INDEX NAME)



RN 721943-29-9 HCPLUS
 CN Benzeneacetamide, N-[4-[(5-chloro-2-thienyl)methyl]amino]-2-nitrophenyl]-4-fluoro- (9CI) (CA INDEX NAME)



RN 721943-31-3 HCPLUS
 CN Butanamide, N-[4-[(5-chloro-2-thienyl)methyl]amino]-2-nitrophenyl]-3,3-dimethyl- (9CI) (CA INDEX NAME)



L13 ANSWER 2 OF 2 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1991:673452 HCPLUS Full-text
 DOCUMENT NUMBER: 115:273452
 TITLE: Aqueous herbicide suspension concentrates for paddy.
 INVENTOR(S): Ogawa, Yasuo; Kimura, Fumio; Kimura, Yakira
 PATENT ASSIGNEE(S): Ishihara Sangyo Kaisha, Ltd., Japan
 SOURCE: Faming Zhanli Shengqing Gongkai Shuomingshu, 17 pp.
 CODEN: CNXXEV
 DOCUMENT TYPE: Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-------------|------|----------|-----------------|----------|
| CN 1050662 | A | 19910417 | CN 1990-107901 | 19900919 |
| CN 1043502 | B | 19990602 | | |
| JP 03173801 | A | 19910729 | JP 1990-24037 | 19900202 |
| ES 2032254 | A1 | 19930116 | ES 1990-2451 | 19900925 |

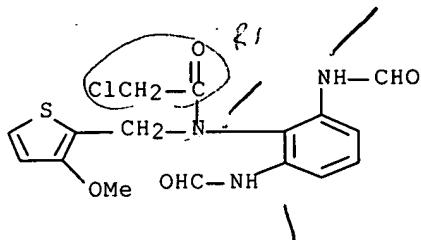
| | | | |
|------------------------|-------------|----------------|------------|
| ES 2032254 | B1 19940116 | KR 1990-15338 | 19900927 |
| KR 181715 | B1 19990401 | JP 1989-252853 | A 19890928 |
| PRIORITY APPLN. INFO.: | | JP 1990-24037 | A 19900202 |

AB The title concentrate contains ≥1 herbicide, surfactant, alkane and water. The herbicide is 4-(2,4-dichlorobenzoyl)-1,3-dimethyl-5-benzoylmethoxypyrazole, 4-(2,4-dichlorobenzoyl)-1,3-dimethyl-5-pyrazolyl p-toluenesulfonate, etc. (34 compds. given). The surfactant is nonionic or anionic.

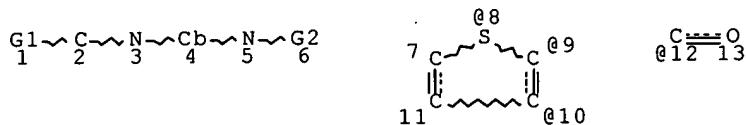
IT 137658-67-4
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(herbicidal composition containing, for paddy)

RN 137658-67-4 HCPLUS

CN Acetamide, N-[2,6-bis(formylamino)phenyl]-2-chloro-N-[(3-methoxy-2-thienyl)methyl]- (9CI) (CA INDEX NAME)



=> => d stat que 120
L1 STR

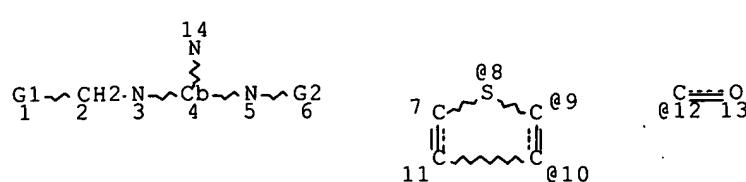


VAR G1=8/9/10
VAR G2=12/SO2
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

L6 2120 SEA FILE=REGISTRY SSS FUL L1
L10 STR



VAR G1=8/9/10

VAR G2=12/SO2

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS MCY AT 4

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 7

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L12 29 SEA FILE=REGISTRY SUB=L6 SSS FUL L10
L13 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L12
L14 6 SEA FILE=HCAPLUS ABB=ON PLU=ON "ROTTLANDER MARIO"/AU
L15 23 SEA FILE=HCAPLUS ABB=ON PLU=ON ("RITZEN A"/AU OR "RITZEN
ANDREAS"/AU)
L16 8 SEA FILE=HCAPLUS ABB=ON PLU=ON "NORGAARD M"/AU OR ("NORGAARD
MORTEN"/AU OR "NORGAARD MORTEN BANG"/AU)
L17 6 SEA FILE=HCAPLUS ABB=ON PLU=ON "KHANZHIN NIKOLAY"/AU
L18 14 SEA FILE=HCAPLUS ABB=ON PLU=ON ("TORNOE C"/AU OR "TORNOE C
W"/AU) OR ("TORNOE CHRISTIAN"/AU OR "TORNOE CHRISTIAN W"/AU)
L19 53 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 OR L15 OR L16 OR L17 OR
L18
L20 52 SEA FILE=HCAPLUS ABB=ON PLU=ON L19 NOT L13

=>

=>

=> d ibib abs hitstr 120 1-52

L20 ANSWER 1 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2007:108216 HCAPLUS Full-text

DOCUMENT NUMBER: 146:219980

TITLE: The potential therapeutic use of phosphodiesterase 10
inhibitors

AUTHOR(S): Kehler, Jan; Ritzen, Andreas; Greve, Daniel
Rodriguez

CORPORATE SOURCE: Medicinal Chemistry, Valby, DK-2500, Den.

SOURCE: Expert Opinion on Therapeutic Patents (2007), 17(2),
147-158

CODEN: EOTPEG; ISSN: 1354-3776

PUBLISHER: Informa Healthcare

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. The discovery of the enzyme phosphodiesterase 10A (PDE10A) was reported simultaneously in 1999 by three independent groups. PDE10A has been shown by localization studies to have the most restricted distribution of all the 11 known PDE families, with the PDE10A mRNA highly expressed only in the brain and testes. In the brain, mRNA and protein are highly enriched in the striatum and, together with increased pharmacol. characterization, this unique distribution of PDE10A in the brain indicates a potential use of PDE10A inhibitors for treating neurol. and psychiatric disorders, in particular, psychotic disorders like schizophrenia. However, PDE10A inhibitors have also been claimed to be useful as treatment for cancer, diabetes and especially obesity. Two years after the reported discovery of PDE10A, Bayer filed the first patent application claiming PDE10A inhibitors, followed shortly

thereafter by Pfizer. Since then, a number of scientific publications and filed patents testify to an increasing pharmaceutical interest in this target. This article highlights and reviews research advances published in the patent literature between the first patent publication in June 2002 and Nov. 2006. The article is supplemented with selected publications from the scientific literature, emphasizing the possible involvement of PDE10A inhibitors in the treatment of schizophrenia and referring to studies aimed at understanding their mechanism and pathophysiol.

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:1339197 HCAPLUS Full-text
DOCUMENT NUMBER: 146:81757
TITLE: Preparation of benzo[b]furan and benzo[b]thiophene derivatives as serotonin, noradrenalin and/or dopamine reuptake inhibitors
INVENTOR(S): Kehler, Jan; Juhl, Karsten; Norgaard, Morten Bang
PATENT ASSIGNEE(S): Den.
SOURCE: U.S. Pat. Appl. Publ., 23pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

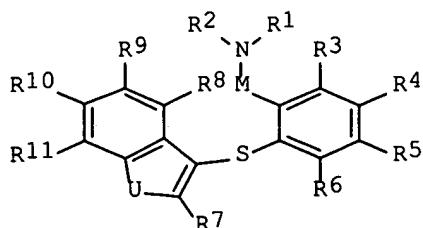
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| US 2006287386 | A1 | 20061221 | US 2006-452823 | 20060614 |
| WO 2007023395 | A2 | 20070301 | WO 2006-IB3395 | 20060614 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |

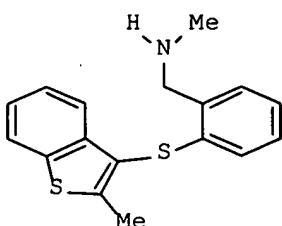
PRIORITY APPLN. INFO.: DK 2005-895 A 20050617

OTHER SOURCE(S): MARPAT 146:81757

GI



I



II

AB The present invention relates to the preparation of benzo[b]furan and benzo[b]thiophene derivs. I [U = O or S; R1-2 independently = H, alkenyl, alkynyl, etc.; R3-6 independently = H, halo, CN, etc.; R7 = H, alkenyl, cycloalkenyl, etc.; R8-11 independently = H, CN, haloalkenyl, etc.; M = (X)_m(Y)_n(Z)_o(Q)_p; m, n, o and p = 0 or 1; X, Y, Z and Q independently = CH₂, CHR₁₂, and CR₁₃R₁₄; R₁₂-14 independently = alkenyl, alkynyl, etc.], and their pharmaceutically acceptable salts, for use as serotonin, noradrenalin and/or dopamine reuptake inhibitors. Thus, e.g., II was prepared by converting intermediate [2-(2-methylbenzo[b]thiophen-3-ylsulfanyl)phenyl]methanol to the mesylate then substitution with Me amine. Methods for bioassays are provided (no data). I is further disclosed for treatment of affective disorders, pain disorders, attention deficit hyperactivity disorder, and stress urinary incontinence.

L20 ANSWER 3 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:1339024 HCAPLUS Full-text

DOCUMENT NUMBER: 146:81763

TITLE: Preparation of 2-(1H-indolylsulfanyl)aryl amine derivatives as serotonin, noradrenalin, and/or dopamine reuptake inhibitors

INVENTOR(S): Kehler, Jan; Juhl, Karsten; Norgaard, Morten Bang

PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.

SOURCE: PCT Int. Appl., 62pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

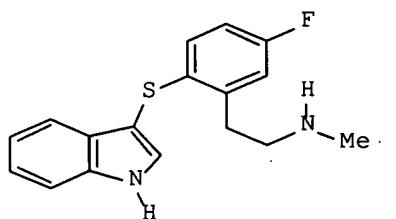
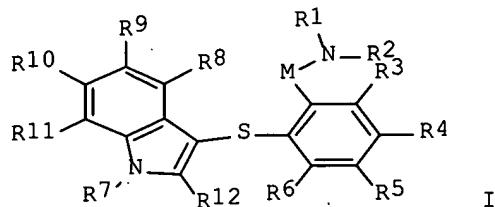
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| WO 2006134499 | A2 | 20061221 | WO 2006-IB2785 | 20060614 |
| W: AE, AG, AL, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, | | | | |

SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ,
 VC, VN, ZA, ZM, ZW
 RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
 IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
 CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
 GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
 KG, KZ, MD, RU, TJ, TM
 US 2006287382 A1 20061221 US 2006-453022 20060614
 PRIORITY APPLN. INFO.: US 2005-692009P P 20050617
 DK 2005-894 A 20050617
 OTHER SOURCE(S): MARPAT 146:81763
 GI



AB Title compds. I [R1-2 independently = H, alkenyl, alkynyl, etc.; R3-6 and R8-12 independently = H, halo, CN, etc.; R7 = H, alkenyl, cycloalkenyl, etc.; M = (X)m(Y)n(Z)o(Q)p; m-p independently = 0-1 with provision that when m+n+o+p = 1 then none of X, Y, Z and Q = CH₂; X, Y, Z and Q = CH₂, CHR₁₃ or CR₁₄R₁₅ wherein R₁₃-15 independently = alkenyl, alkynyl, cycloalkenyl, etc.], and their pharmaceutically acceptable salts, are prepared and disclosed as serotonin, noradrenalin, and/or dopamine reuptake inhibitors. Thus, e.g., II was prepared by deprotection of corresponding N-BOC derivative (preparation given). Bioassay methods are described (no data). I is further disclosed for treatment of affective disorders, pain disorders, attention deficit hyperactivity disorder, and stress urinary incontinence.

L20 ANSWER 4 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:917475 HCPLUS Full-text
 DOCUMENT NUMBER: 145:315000
 TITLE: Substituted morpholinylpyridine derivatives as potassium channel openers, their preparation, pharmaceutical compositions, and use in therapy
 INVENTOR(S): Tornoe, Christian Wenzel; Khanzhin, Nikolay ; Rottlaender, Mario; Watson, William Patrick; Greve, Daniel Rodriguez

PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.
 SOURCE: PCT Int. Appl., 64pp.
 CODEN: PIIXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|-------------------|-----------------|-----------------|----------|
| WO 2006092143 | A1 | 20060908 | WO 2006-DK123 | 20060302 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| PRIORITY APPLN. INFO.: | | DK 2005-321 | A 20050303 | |
| | | US 2005-658428P | P 20050303 | |
| OTHER SOURCE(S): | MARPAT 145:315000 | | | |
| GI | | | | |

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to pyridine derivs. of the general formula I, which are openers of the KCNQ family of potassium ion channels. In compds. I, q is 0 or 1; R1 and R2 are independently selected from halo, cyano, C1-6 alkyl, C3-8 cycloalkyl, C3-8 cycloalkyl-C1-6 alkyl, halo-C1-6 alkyl, C2-6 alkenyl, C2-6 alkynyl, etc.; and R3 is selected from C1-8 alkyl, C2-8 alkenyl, C2-8 alkynyl, C3-8 cycloalkyl, (un)substituted aryl-C1-6 alkyl, (un)substituted aryl-C3-8 cycloalkyl, heteroaryl-C1-6 alkyl, etc. The invention also relates to the preparation of I, pharmaceutical compns. comprising a compound according to formula I and one or more pharmaceutically acceptable carriers or diluents, as well as to the use of the compns. for the treatment of CNS disorders, such as epilepsy. Heterocyclization of 2-amino-4,6-dimethylpyridine with bis(2-chloroethyl) ether gave morpholinylpyridine II, which underwent nitration, reduction, and acylation with 3-(3-chlorophenyl)propionic acid to give (acylamino)pyridine III. Of the compds. of the invention, many express EC50 values of less than 200 nM in an assay for relative efflux through the KCNQ2 channel (no specific data).

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2006:402269 HCPLUS Full-text
 DOCUMENT NUMBER: 145:203099
 TITLE: Use of postmenopausal hormone replacement therapy and risk of non-Hodgkin's lymphoma: a Danish Population-based Cohort Study.
 AUTHOR(S): Norgaard, M.; Poulsen, A. H.; Pedersen, L.; Gregersen, H.; Friis, S.; Ewertz, M.; Johnsen, H. E.;

CORPORATE SOURCE: Sorensen, H. T.
Department of Clinical Epidemiology, Aarhus University Hospital, Aalborg, DK-9100, Den.
SOURCE: British Journal of Cancer (2006), 94(9), 1339-1341
CODEN: BJCAAI; ISSN: 0007-0920
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Use of postmenopausal hormone replacement therapy (HRT) has been hypothesised to be associated with a reduced risk of non-Hodgkin's lymphoma (NHL), but the epidemiol. evidence is conflicting. To examine the risk of NHL in HRT users aged 40 and older, we conducted a cohort study in the County of North Jutland, Denmark (population 0.5 million) using data from population-based health registries for the period 1989-2002. We computed age-standardized NHL incidence rates and used Cox regression anal. to compute the relative risk (RR) and corresponding 95% confidence intervals (CI) of NHL among HRT users compared with non-users, adjusting for age and calendar period. The number of prescriptions redeemed (1, 2-4, 5-9, 10-19, or 20 or more prescriptions) was used as a proxy for duration of HRT. We identified 40 NHL cases among HRT users during 179,838 person-years of follow-up and 310 NHL cases among non-users during 1 247,302 person-years of follow-up. The age-standardized incidence rates of NHL were 25.7 per 100,000 among HRT users and 24.2 per 100,000 among non-users, yielding an adjusted RR of 0.99 (95% CI: 0.71-1.39). Our data did not support an association between HRT use and risk of NHL.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:366808 HCPLUS Full-text
DOCUMENT NUMBER: 145:305508
TITLE: Optimizing Lithium Dosing in Hemodialysis
AUTHOR(S): Bjarnason, N. H.; Munkner, R.; Kampmann, J. P.;
Tornoe, C. W.; Ladefoged, S.; Dalhoff, K.
CORPORATE SOURCE: Department of Clinical Pharmacology, Rigshospitalet,
Copenhagen, Den.
SOURCE: Therapeutic Drug Monitoring (2006), 28(2), 262-266
CODEN: TDMODV; ISSN: 0163-4356
PUBLISHER: Lippincott Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English

AB We studied a 62-yr-old female hemodialysis patient during initiation and maintenance of lithium carbonate therapy. Three different methods were applied to estimate the regimen: a scenario based on volume of distribution (Vd), a scenario based on glomerular filtration rate (GFR), and a scenario in which we developed an algorithm based on a 2-compartment distribution without elimination. The GFR estimate led to plasma concns. 3-4 times lower than those anticipated. In contrast, the ests. based on Vd and the algorithm derived from pharmacokinetic modeling led to comparable loading dose ests. Furthermore, the maintenance dose estimated from the central compartment (V1) led to plasma concns. within the therapeutic range. Thus, a regimen where 12.2 mmol lithium was given after each hemodialysis session resulted in stable between-dialysis plasma lithium concns. in this patient with no residual kidney function. We did not observe adverse effects related to this regimen, which was monitored from 18 days to 8 mo of therapy, and the patient experienced relief from her severe depressive disorder. In conclusion, dialysis patients may be treated with lithium administrated immediately postdialysis. Further observations are necessary to obtain robust long-term safety data and to optimize the monitoring schedule.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 7 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2006:269060 HCAPLUS Full-text
DOCUMENT NUMBER: 144:311786
TITLE: Substituted aniline derivatives as KCNQ subtype potassium ion channel openers, their preparation, pharmaceutical compositions, and use in therapy
INVENTOR(S): Tornoee, Christian Wenzel; Rottlaender, Mario; Greve, Daniel Rodriguez; Khanzhin, Nikolay; Ritzen, Andreas; Watson, William Patrick
PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.
SOURCE: PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|-------------|
| WO 2006029623 | A1 | 20060323 | WO 2005-DK560 | 20050902 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| US 2006155121 | A1 | 20060713 | US 2005-312664 | 20051220 |
| PRIORITY APPLN. INFO.: | | | DK 2004-1394 | A 20040913 |
| | | | US 2004-609856P | P 20040913 |
| | | | WO 2005-DK560 | A1 20050902 |

OTHER SOURCE(S): MARPAT 144:311786
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to aniline derivs. of formula I, which are openers of the KCNQ family of potassium ion channels. In compds. I, Z is O or S; q is 0 or 1; R1 and R2 are independently selected from halo, cyano, amino, C1-6 alkyl, C2-6 alkenyl, C3-8 cycloalkyl, C3-8 heterocyclyl, aryl, heteroaryl, etc.; R3 is selected from C1-8 alkyl, C2-8 alkenyl, C3-8 cycloalkyl, aryl-C1-6 alkyl, aryl-C3-8 cycloalkyl, C3-8 heterocyclyl-C1-6 alkyl, heteroaryl-C1-6 alkyl, etc.; and R4 is selected from halo, cyano, C1-6 alkyl, C2-6 alkenyl, C3-8 cycloalkyl, C3-8 heterocyclyl, aryl, heteroaryl, aryl-C1-6 alkyl, (un)substituted amino, etc. The invention also relates to the preparation of I, pharmaceutical compns. comprising a compound I with one or more pharmaceutically acceptable carriers or diluents, as well as to the use of the compns. for the treatment of a disorder or disease being responsive to an increased ion flow in a potassium channel, such as epilepsy. Amidation of cyclopentaneacetyl chloride with 4-bromo-2,6-dimethylaniline gave acetamide II, which underwent substitution with pyrrole to give acetanilide III. Some

compds. of the invention express EC50 values below 200 nM in an assay for affinity for the KCNQ2 receptor subtype.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 8 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1198677 HCPLUS Full-text
DOCUMENT NUMBER: 143:409564
TITLE: Retrofitted pipe plants
AUTHOR(S): Norgaard, Morten
CORPORATE SOURCE: Germany
SOURCE: Betonwerk + Fertigteil-Technik (2003), 69(10), 58-62
CODEN: BWFTAB; ISSN: 0373-4331
PUBLISHER: BertelsmannSpringer Bauverlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English/German

AB During the past years several new automatic pipe plants have been established or retrofitted in the USA. A large part of the plants have been built up from the ground with the challenges that planning, permission etc. bring. Contrary to these plants other installations have been carried out on the basis of existing buildings with the utmost consideration to partly reduce the extent of the building investments, at the same time making use of earlier investments in production equipment.

L20 ANSWER 9 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1124699 HCPLUS Full-text
DOCUMENT NUMBER: 143:378927
TITLE: Molecular pharmacology and therapeutic prospects of metabotropic glutamate receptor allosteric modulators
AUTHOR(S): Ritzén, Andreas; Mathiesen, Jesper Mosolff; Thomsen, Christian
CORPORATE SOURCE: Department of Medicinal Chemistry, H. Lundbeck A/S, Research, Valby, Den.
SOURCE: Basic & Clinical Pharmacology & Toxicology (2005), 97(4), 202-213
CODEN: BCPTBO; ISSN: 1742-7835
PUBLISHER: Blackwell Publishing Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review. The metabotropic glutamate receptors (mGluR) consist of a family of eight G-protein-coupled receptors that differ in their function, distribution and physiol. roles within the central nervous system. In recent years substantial efforts have been made towards developing selective agonists and antagonists which have proven useful for elucidating their potential as novel targets for the treatment of psychiatric and neurol. diseases. In the present review the authors will provide an update of the recent developments of functional allosteric modulators of the mGluR family and explore their therapeutic potential for anxiety/depression, schizophrenia, epilepsy/stroke, pain and Alzheimer's, Parkinson's and Huntington's diseases.

REFERENCE COUNT: 71 THERE ARE 71 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 10 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:1026943 HCPLUS Full-text
DOCUMENT NUMBER: 143:306325
TITLE: Substituted morpholine and thiomorpholine derivatives as potassium channel openers, their preparation, pharmaceutical compositions, and use
INVENTOR(S): Wenzel Tornoe, Christian; Rottlaender, Mario;

Khanzhin, Nikolay; Ritzen, Andreas;
 Watson, William Patrick
 PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.
 SOURCE: PCT Int. Appl., 88 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| WO 2005087754 | A1 | 20050922 | WO 2005-DK159 | 20050309 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2005221762 | A1 | 20050922 | AU 2005-221762 | 20050309 |
| CA 2559397 | A1 | 20050922 | CA 2005-2559397 | 20050309 |
| EP 1727809 | A1 | 20061206 | EP 2005-706819 | 20050309 |
| R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR | | | | |
| US 2006167248 | A1 | 20060727 | US 2005-314802 | 20051221 |
| PRIORITY APPLN. INFO.: | | | DK 2004-412 | A 20040312 |
| | | | US 2004-552574P | P 20040312 |
| | | | WO 2005-DK159 | W 20050309 |

OTHER SOURCE(S): MARPAT 143:306325

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The invention relates to morpholine and thiomorpholine derivs. I, which are potassium channel openers. In compds. I, W is O or S; Z is a bond or O; R1 is selected from halo, cyano, C1-6 alkyl, C2-6 alkenyl, C2-6 alkynyl, C3-8 cycloalk(en)yl(oxy), etc.; R2 is selected from halo, cyano, C1-6 alkyl, C3-8 cycloalk(en)yl(oxy), (un)substituted Ph, (un)substituted pyridinyl, etc.; R3 is selected from C1-10 alkyl, C2-10 alkenyl, C2-10 alkynyl, C3-8 cycloalk(en)yl, aryl-C3-8 cycloalk(en)yl, aryl, etc.; and each of R4, R5, R6, and R7 is independently selected from H and aryl; as the free base or salts thereof. The invention also relates to the preparation of I, pharmaceutical compns. containing one or more of compds. I and one or more pharmaceutically acceptable carriers or diluents, as well as to the use of the compns. for the treatment of a disorder or disease responding to an increased ion flow in a potassium channel. 4-Nitro-2-(trifluoromethyl)aniline underwent ortho-bromination and reduction to give diamine II. II cyclized regioselectively with bis-(2-bromoethyl)ether to give the corresponding morpholine, which was acylated with 4-fluorophenylacetyl chloride resulting in the formation of morpholine derivative III. The compds. of the invention express an EC50 value of less than 20 μ M, and in many cases less than 200 nM, in the assay of relative efflux through the KCNQ2 channel.

REFERENCE COUNT:

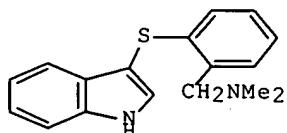
5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 11 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2005:588896 HCPLUS Full-text
 DOCUMENT NUMBER: 143:115436
 TITLE: 2-(1H-Indolylsulfanyl)benzyl amine derivatives as selective serotonin reuptake inhibitors
 INVENTOR(S): Kehler, Jan; Juhl, Karsten; Sejberg, Jimmy;
 Norgaard, Morten Bang
 PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.
 SOURCE: PCT Int. Appl., 89 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|------------------|------------|
| WO 2005061455 | A1 | 20050707 | WO 2004-DK894 | 20041221 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2004303461 | A1 | 20050707 | AU 2004-303461 | 20041221 |
| CA 2551168 | A1 | 20050707 | CA 2004-2551168 | 20041221 |
| EP 1701940 | A1 | 20060920 | EP 2004-803045 | 20041221 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU | | | | |
| CN 1898204 | A | 20070117 | CN 2004-80038470 | 20041221 |
| US 2006160880 | A1 | 20060720 | US 2005-314702 | 20051221 |
| PRIORITY APPLN. INFO.: | | | DK 2003-1923 | A 20031223 |
| | | | US 2003-532593P | P 20031223 |
| | | | WO 2004-DK894 | W 20041221 |

OTHER SOURCE(S): MARPAT 143:115436

GI



AB The present invention relates to the title compds. and their use as serotonin reuptake inhibitors and preferably also norepinephrine reuptake inhibitors in the treatment of depression, anxiety, affective disorders, pain disorders, attention deficit hyperactivity disorder (ADHD) and stress urinary

incontinence. 2-(1H-indol-3-ylsulfanyl)-N,N-dimethylbenzamide was reduced with borane in THF to give I. Biol. testing data include measurements of [³H]-5-HT uptake and [³H]noradrenaline uptake into rat cortical synaptosomes.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 12 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:254835 HCPLUS Full-text
DOCUMENT NUMBER: 143:400
TITLE: Metronidazole and risk of acute pancreatitis: a population-based case-control study
AUTHOR(S): Norgaard, M.; Ratanajamit, C.; Jacobsen, J.; Skriver, M. V.; Pedersen, L.; Sorensen, H. T.
CORPORATE SOURCE: Department of Clinical Epidemiology, Aarhus University Hospital, Aarhus C, Den.
SOURCE: Alimentary Pharmacology and Therapeutics (2005), 21(4), 415-420
CODEN: APTHEN; ISSN: 0269-2813
PUBLISHER: Blackwell Publishing Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Use of metronidazole has been suggested to be associated with an increased risk of acute pancreatitis in case reports. To examine this issue within a proper epidemiol. design. We identified 3083 incident cases of acute pancreatitis from Hospital Discharge Registries in three Danish counties and 30 830 matched population controls. From prescription databases, we extracted information on use of metronidazole with or without concomitant use of proton-pump inhibitors and/or amoxicillin, macrolides or tetracycline. Adjusted odds ratios for acute pancreatitis in study subjects who redeemed a prescription for metronidazole within 30, 31-180, or 181-365 days before hospitalization or index date among controls were 3.0 [95% confidence interval (CI): 1.4-6.6], 1.8 (95% CI: 1.2-2.9) and 1.1 (95% CI: 0.6-1.8), resp. Among subjects with a concomitant prescription for proton-pump inhibitors and/or amoxicillin, macrolides or tetracycline within 30, 31-180, or 181-365 days before hospitalization, or index date among controls, adjusted odds ratios were 8.3 (95% CI: 2.6-26.4), 2.7 (95% CI: 1.4-5.5), and 1.7 (95% CI: 0.6-4.8), resp. Metronidazole may increase the risk of acute pancreatitis. However, the risk seems mainly to increase when metronidazole is used in combination with other drugs used for Helicobacter pylori eradication.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

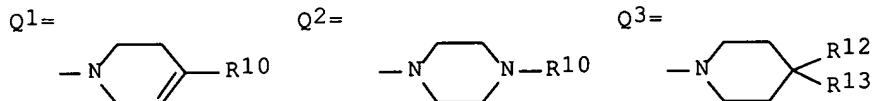
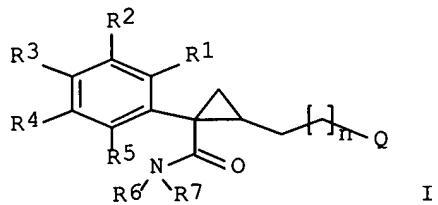
L20 ANSWER 13 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2005:158639 HCPLUS Full-text
DOCUMENT NUMBER: 142:261403
TITLE: Preparation of 1-phenylcyclopropane-1-carboxamide derivatives as tachykinin NK3 receptor antagonists
INVENTOR(S): Kehler, Jan; Hansen, Tore; Poulsen, Anders; Bjornholm, Berith; Ruhland, Thomas; Norgaard, Morten Bang ; Nielsen, Soren Moller
PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.
SOURCE: PCT Int. Appl., 99 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|-------|-------|-----------------|-------|
| ----- | ----- | ----- | ----- | ----- |

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|--|----|-----------------|------------------|----------|
| WO 2005016884 | A1 | 20050224 | WO 2004-DK538 | 20040813 |
| WO 2005016884 | A9 | 20060316 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2004265020 | A1 | 20050224 | AU 2004-265020 | 20040813 |
| CA 2535646 | A1 | 20050224 | CA 2004-2535646 | 20040813 |
| EP 1656349 | A1 | 20060517 | EP 2004-739035 | 20040813 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK | | | | |
| BR 2004013584 | A | 20061017 | BR 2004-13584 | 20040813 |
| CN 1867549 | A | 20061122 | CN 2004-80029691 | 20040813 |
| JP 2007502253 | T | 20070208 | JP 2006-522897 | 20040813 |
| NO 2006001137 | A | 20060309 | NO 2006-1137 | 20060309 |
| US 2006281746 | A1 | 20061214 | US 2006-568483 | 20060814 |
| PRIORITY APPLN. INFO.: | | | | |
| | | DK 2003-1175 | A 20030815 | |
| | | US 2003-501535P | P 20030908 | |
| | | WO 2004-DK538 | W 20040813 | |

OTHER SOURCE(S): MARPAT 142:261403

GI



AB The present invention relates to cyclopropyl derivs. of formula (I) or salts thereof such as pharmaceutically acceptable salts [wherein R1-R5 = independently H, halogen, cyano, nitro, C1-6 alk(en/yn)yl, C3-8 cycloalk(en)yl, C3-8 cycloalk(en)yl-C1-6-alk(en/yn)yl, amino, C1-6 alk(en/yn)ylamino, di[C1-6-alk(en/yn)yl]amino, C1-6 alk(en/yn)ylcarbonyl, aminocarbonyl, C1-6-alk(en/yn)ylaminocarbonyl, di[C1-6 alk(en)yl]aminocarbonyl, hydroxy, C1-6 alk(en/yn)yloxy, C1-6-alk(en/yn)ylthio, halo-C1-6 alk(en/yn)yl, halo-C1-6 alk(en/yn)ylsulfonyl, halo-C1-6 alk(en/yn)ylsulfanyl, and C1-6 alk(en/yn)ylsulfonyl; R6 = H, halo-C1-6 alk(en/yn)yl, C1-6 alk(en/yn)yl, C3-8 cycloalk(en)yl, C3-8 cycloalk(en)yl-C1-6 alk(en/yn)yl; R7 = aryl, heteroaryl, aryl-CR8R9- (wherein R8, R9 = H, C1-6 alk(en/yn)yl, C3-8 cycloalk(en)yl, C3-8 cycloalk(en)yl-C1-6 alk(en/yn)yl); n =

0-2; Q = Q1, Q2, Q3, etc.; R10, R12 = aryl; R11 = aryl, benzyl, halo-C1-6 alk(en/yn)ylsulfonyl, C1-6 alk(en/yn)ylsulfonyl, arylsulfonyl, arylacyl, C1-6 alk(en/yn)ylcarbonyl, aminocarbonyl, etc.; R13 = H, HO, cyano, or NH₂, etc.]. These compds. are NK3 receptor antagonists and may therefore be useful for treatment of diseases where the NK3 receptor is implicated, including psychotic disorders, schizophrenia, depression, anxiety, Parkinson's disease, pain, convulsions, cough, asthma, airway hyperresponsiveness, microvascular hypersensitivity, bronchoconstriction, gut inflammation, inflammatory bowel disease, hypertension, imbalances in water and electrolyte homeostasis, ischemia, edema, plasma extravasation, and obesity. For example, (1S,2R)-2-(4-acetylamino-4-phenylpiperidin-1-ylmethyl)-1-(3,4-dichlorophenyl)cyclopropanecarboxylic acid N-benzyl-N-methylamide had an apparent NK3 affinity (K_i) of less than 50 nM in using a membrane prepared from baby hamster cells stably expressing the human NK3 receptor.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 14 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:965219 HCPLUS Full-text
 DOCUMENT NUMBER: 141:395417
 TITLE: Preparation of substituted indoline and indole derivatives as openers of the KCNQ family potassium channels
 INVENTOR(S): Khanzhin, Nikolay; Rottlaender, Mario;
 Watson, William Patrick
 PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.
 SOURCE: PCT Int. Appl., 129 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|-----------------|------------------|----------|
| WO 2004096767 | A1 | 20041111 | WO 2004-DK283 | 20040423 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2004233941 | A1 | 20041111 | AU 2004-233941 | 20040423 |
| CA 2523102 | A1 | 20041111 | CA 2004-2523102 | 20040423 |
| EP 1631546 | A1 | 20060308 | EP 2004-729044 | 20040423 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR | | | | |
| BR 2004009317 | A | 20060425 | BR 2004-9317 | 20040423 |
| CN 1777582 | A | 20060524 | CN 2004-80011019 | 20040423 |
| JP 2006524641 | T | 20061102 | JP 2006-504366 | 20040423 |
| NO 2005005562 | A | 20051124 | NO 2005-5562 | 20051124 |
| US 2006264496 | A1 | 20061123 | US 2006-551738 | 20060207 |
| PRIORITY APPLN. INFO.: | | | | |
| | | DK 2003-631 | A | 20030425 |
| | | US 2003-465387P | P | 20030425 |
| | | WO 2004-DK283 | W | 20040423 |

PATENT ASSIGNEE(S): Pedershaab Concrete Technologies A/s, Den.
 SOURCE: PCT Int. Appl.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| WO 2004062867 | A1 | 20040729 | WO 2004-DK2 | 20040107 |
| WO 2004062867 | B1 | 20040910 | | |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ | | | | |
| DK 2003000013 | A | 20040711 | DK 2003-13 | 20030110 |
| DK 175871 | B1 | 20050502 | | |
| EP 1590142 | A1 | 20051102 | EP 2004-700440 | 20040107 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| US 2006033227 | A1 | 20060216 | US 2005-540235 | 20050621 |
| PRIORITY APPLN. INFO.: DK 2003-13 A 20030110 WO 2004-DK2 W 20040107 | | | | |

AB A method and an apparatus for the manufacture of concrete pipes (2) comprising an outer layer, said outer layer forming the pipe (2) itself, as well as an inner layer of greater d. in surface structure, said inner layer being applied by an applicator in a mold (1) comprising both outer (3) and inner (4) mold parts, said applicator being formed by an inner mold part or core (4) or by an applicator unit in immediate connection with the core (4), said applicator applying the inner layer during simultaneous or during immediately following vibration, said inner layer being applied during movement of the inner mold part or core (4) in its longitudinal direction, in which core one or more supply openings (14) are provided along the circumference of the core (4) at the upper end of the core (4) for the supply of a further material.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 17 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2004:468595 HCPLUS Full-text
 DOCUMENT NUMBER: 142:156289
 TITLE: Pyrazines on solid support from peptides by periodinane oxidation of threonine side-chains. A quantitative chemical transformation (QCT) for combinatorial chemistry
 AUTHOR(S): Christensen, Caspar; Tornoe, Christian W.; Meldal, Morten
 CORPORATE SOURCE: Department of Chemistry, Carlsberg Laboratory, Valby, DK-2500, Den.
 SOURCE: QSAR & Combinatorial Science (2004), 23(2-3), 109-116
 CODEN: QCSSAU; ISSN: 1611-020X
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 142:156289
 GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The β -hydroxymethylene in threonine residues adjacent to an N-terminal amino acid were subjected to oxidation effected by Dess-Martin periodinane on solid support. Fmoc-cleavage at the N-terminal amino acid afforded 3,6-dihydro-1H-pyrazin-2-one, which oxidized spontaneously to the 1H-pyrazin-2-ones I (R is an amino acid side chain). A variety of naturally occurring and synthetic α -amino acids gave rise to a diverse subset of functionalized 1H-pyrazin-2-ones. An amino functionality in the side-chain of the N-terminal amino acid residue allowed elongation by conventional solid phase peptide chemical, yielding II (n = 1 or 4). Furthermore, elongation of the side-chain with Thr and a second amino acid followed by oxidation afforded bis-1H-pyrazin-2-one III in high yield.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 18 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:267885 HCPLUS Full-text

DOCUMENT NUMBER: 141:401

TITLE: Combinatorial Library of Peptidotriazoles:
Identification of [1,2,3]-Triazole Inhibitors against a Recombinant Leishmania mexicana Cysteine Protease

AUTHOR(S): Tornoe, Christian W.; Sanderson, Sanya J.; Mottram, Jeremy C.; Coombs, Graham H.; Meldal, Morten

CORPORATE SOURCE: Center for Solid-Phase Organic Combinatorial Chemistry, Department of Chemistry, Carlsberg Laboratory, Valby, DK-2500, Den.

SOURCE: Journal of Combinatorial Chemistry (2004), 6(3), 312-324

CODEN: JCCHFF; ISSN: 1520-4766

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 141:401

AB A library consisting of about half of 800 000 possible peptidotriazoles on 450 000 beads was prepared by solid-phase peptide synthesis combined with a regiospecific copper(I)-catalyzed 1,3-dipolar cycloaddn. between a resin-bound alkyne and a protected amino azide. The central [1,2,3]-triazole was flanked on each side by two randomized amino acids introduced in a combinatorial approach. Importantly, the formation of the triazole could be performed quant. in a randomized fashion. The library was screened on solid phase for inhibitory effect against a recombinant cysteine protease, Leishmania mexicana CPB2.8 Δ CTE and sorted by a high-throughput instrument, COPAS beadsoriter (up to 200 000 beads/h). Forty-eight hits were analyzed by MALDI-TOF MS providing structural information about the protease specificity, and 23 peptidotriazoles were resynthesized and evaluated in solution, with the best inhibitor displaying a Ki value of 76 nM. A one-pot procedure was used to convert Fmoc-amino azides into their corresponding Boc derivs. The crucial influence of weak interactions with a spacer used for detection by MALDI-TOF MS on screening results was observed

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 19 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:173709 HCPLUS Full-text

DOCUMENT NUMBER: 141:116419

TITLE: Interaction of Epothilone Analogs with the Paclitaxel Binding Site Relationship between Binding Affinity, Microtubule Stabilization, and Cytotoxicity

AUTHOR(S): Buey, Ruben M.; Diaz, J. Fernando; Andreu, Jose M.; O'Brate, Aurora; Giannakakou, Paraskevi; Nicolaou, K. C.; Sasmal, Pradip K.; Ritzen, Andreas; Namoto, Kenji

CORPORATE SOURCE: Consejo Superior de Investigaciones Cientificas, Centro de Investigaciones Biologicas, Madrid, 28040, Spain

SOURCE: Chemistry & Biology (2004), 11(2), 225-236
CODEN: CBOLE2; ISSN: 1074-5521

PUBLISHER: Cell Press

DOCUMENT TYPE: Journal

LANGUAGE: English

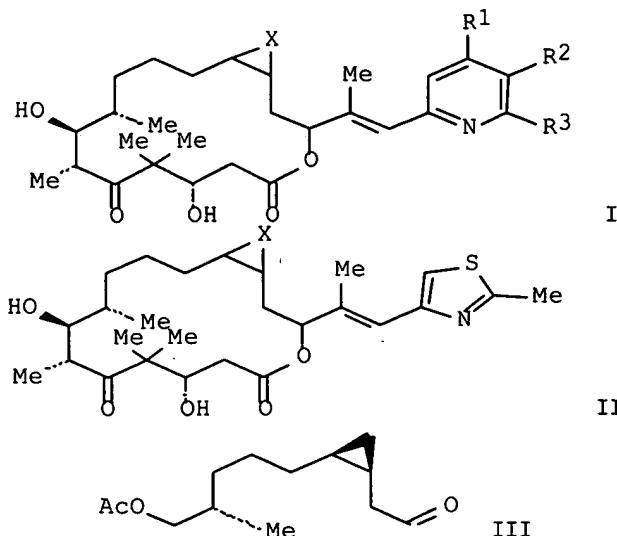
AB The interactions of epothilone analogs with the paclitaxel binding site of microtubules were studied. The influence of chemical modifications in the C15 side chain and in C12 on binding affinity and microtubule elongation was characterized. Modifications favorable for binding affinity are (1) a thiomethyl group at C21 of the thiazole side chain, (2) a Me group at C12 in S configuration, (3) a pyridine side chain with C15 in S configuration, and (4) a cyclopropyl moiety between C12 and C13. The same modification in different ligands has similar effect on affinity, allowing good structure-affinity characterization. The correlation between binding, microtubule stabilization, and cytotoxicity of the compds. has been determined, showing differential effects of the modifications. The binding consts. correlate well with IC50 values, demonstrating that affinity measurements are a useful tool for drug design.

REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 20 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2004:162465 HCPLUS Full-text
DOCUMENT NUMBER: 140:199143
TITLE: Preparation of cyclopropyl and cyclobutyl epothilone analogs as antitumor agents and potent tubulin polymerization promoters
INVENTOR(S): Nicoloou, Kyriacos C.; Namoto, Kenji; Ritzen, Andreas; Shoji, Mitsuru; Ulven, Trond; Altmann, Karl-Heinz
PATENT ASSIGNEE(S): The Scripps Research Institute, USA
SOURCE: U.S. Pat. Appl. Publ., 35 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|------------|-----------------|----------|
| US 2004039026 | A1 | 20040226 | US 2002-227073 | 20020823 |
| PRIORITY APPLN. INFO.: | | | US 2002-227073 | 20020823 |
| OTHER SOURCE(S): | MARPAT | 140:199143 | | |

GI



AB Cis- and trans-12, 13-cyclopropyl and 12,13-cyclobutyl epothilones I ($X = \text{CH}_2, \text{CH}_2\text{CH}_2$; R₁ = fused ring structure with R₂, C₁-C₆ alkane; R₂ = fused ring structure with R₁ or R₃, C₁-C₆ alkane) or II ($X = \text{CH}_2, \text{CH}_2\text{CH}_2$) were prepared as potent tubulin polymerization promoters and cytotoxic agents for use as anticancer agents. Thus, III was subjected to Nozaki-Hiyama-Kishi coupling, an aldol reaction and Yamaguchi lactonization followed by deprotection to yield II ($X = \text{CH}_2$) with an IC₅₀ of 1.60 nM against 1A9 human ovarian carcinoma cells. As well, 83% of tubulin polymerized after incubation with 3 μM of II ($X = \text{CH}_2$).

L20 ANSWER 21 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:143161 HCAPLUS Full-text

DOCUMENT NUMBER: 140:181252

TITLE: Preparation and formulation of epothilone B derivatives as antitumor agents

INVENTOR(S): Namoto, Kenji; Nicolaou, Kyriacos Costa; Ritzen, Andreas

PATENT ASSIGNEE(S): Novartis Ag, Switz.; Novartis Pharma GmbH; The Scripps Research Institute

SOURCE: PCT Int. Appl., 89 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

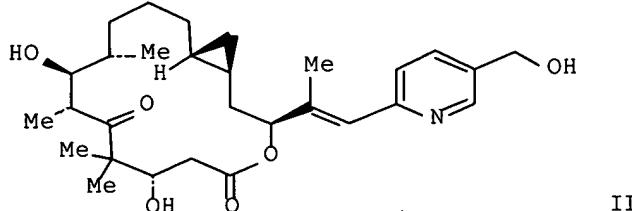
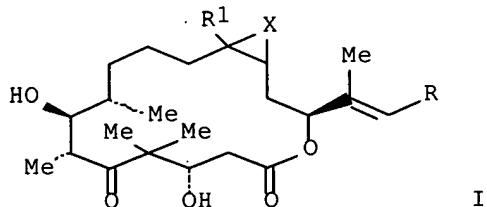
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|----------|
| WO 2004014919 | A1 | 20040219 | WO 2003-EP8554 | 20030801 |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SE, SG, SK, SY, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW | | | | |
| RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, | | | | |

SI, SK, TR
 CA 2494259 A1 20040219 CA 2003-2494259 20030801
 AU 2003266961 A1 20040225 AU 2003-266961 20030801
 EP 1546152 A1 20050629 EP 2003-747872 20030801
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
 BR 2003013198 A 20050712 BR 2003-13198 20030801
 CN 1675220 A 20050928 CN 2003-818644 20030801
 JP 2006503814 T 20060202 JP 2004-526852 20030801
 US 2004072870 A1 20040415 US 2003-634537 20030804
 US 7169930 B2 20070130
 US 2006293527 A1 20061228 US 2006-511610 20060828
 PRIORITY APPLN. INFO.: US 2002-400535P P 20020802
 US 2003-480933P P 20030624
 WO 2003-EP8554 W 20030801
 US 2003-634537 A1 20030804

OTHER SOURCE(S): MARPAT 140:181252
 GI



AB Epothilone B derivs. of formula I [R = (substituted) heterocycl; R1 = H, Me; X = O, CH2] are prepared for the treatment of proliferative diseases, such as a tumor. Pharmaceutical compns. containing I are described. Thus, II was prepared, and had IC50 of 0.7 against 1A9 human ovarian carcinoma cells.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 22 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2003:782650 HCPLUS Full-text
 DOCUMENT NUMBER: 140:5178
 TITLE: Total synthesis of 1-O-methyllateriflorone
 AUTHOR(S): Nicolaou, K. C.; Sasmal, Pradip K.; Xu, Hao; Namoto, Kenji; Ritzen, Andreas
 CORPORATE SOURCE: Department of Chemistry and The Skaggs Institute for Chemical Biology, The Scripps Research Institute, La Jolla, CA, 92037, USA
 SOURCE: Angewandte Chemie, International Edition (2003), 42(35), 4225-4229
 CODEN: ACIEF5; ISSN: 1433-7851

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 140:5178
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The authors report the total synthesis of 1-O-methylateriflorone using prenylated 2,2'-dimethylbenzopyran fragment I and cage ring system II as starting materials. After preparation of II from benzenoid III, II was then reacted with 4-MeC₆H₄SO₃H, Dess-Martin periodinane, NaClO₂, and I/4-DMAP to give a compound which was converted to quinone IV. Exposure of IV to pyridinium p-toluenesulfonate in refluxing benzene gave the title compound in 83% yield.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 23 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:509497 HCPLUS Full-text

DOCUMENT NUMBER: 140:164542

TITLE: EXPO3000 - a new expandable polymer for organic synthesis and enzymatic assays

AUTHOR(S): Tornoe, Christian W.; Meldal, Morten

CORPORATE SOURCE: Department of Chemistry, Carlsberg Laboratory, Valby, DK-2500, Den.

SOURCE: Peptides 2000, Proceedings of the European Peptide Symposium, 26th, Montpellier, France, Sept. 10-15, 2000 (2001), Meeting Date 2000, 281-282. Editor(s): Martinez, Jean; Fehrentz, Jean-Alain. Editions EDK: Paris, Fr.

CODEN: 69EDWK; ISBN: 2-84254-048-4

DOCUMENT TYPE: Conference

LANGUAGE: English

AB A symposium report. EXPO3000 is a copolymer of PEG3000 bis(3-methyloxetan-3-ylmethyl ether) with tetrakis[4-(3-methyloxetan-3-ylmethyl)phenyl]silane which has low swelling in solvents ranging from polar to nonpolar and could be expanded by cleaving a crosslinking unit within the resin. It is well suited to organic synthesis before swelling, whereas the high swelling after expansion makes it suitable for on-bead enzymic assays.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 24 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:173421 HCPLUS Full-text

DOCUMENT NUMBER: 138:221391

TITLE: Synthesis of cyclopropyl and cyclobutyl epothilone analogs and their antitumor and tubulin polymerization inhibitory activities

INVENTOR(S): Nicolaou, Kyriacos Costa; Namoto, Kenji; Ritzen, Andreas; Ulven, Trond; Shoji, Mutsuru; Altmann, Karl-heinz

PATENT ASSIGNEE(S): Novartis AG, Switz.; Novartis-Erfindungen Verwaltungsgesellschaft M.B.H.; The Scripps Research Institute; Novartis Pharma GmbH

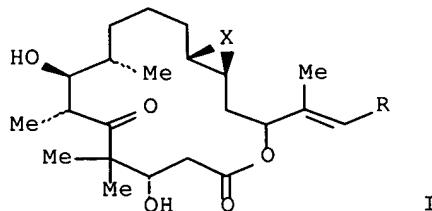
SOURCE: PCT Int. Appl., 65 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|---|----------|-----------------|------------|
| WO 2003018002 | A2 | 20030306 | WO 2002-EP9407 | 20020822 |
| WO 2003018002 | A3 | 20030904 | | |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LT, LU, LV, MA, MD, MK, MN, MX, NO, NZ, OM, PH, PL, PT, RO, RU, SE, SG, SI, SK, TJ, TM, TN, TR, TT, UA, US, UZ, VC, VN, YU, ZA, ZW RW: AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR | | | |
| CA 2456280 | A1 | 20030306 | CA 2002-2456280 | 20020822 |
| EP 1420780 | A2 | 20040526 | EP 2002-767418 | 20020822 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | |
| BR 2002012107 | A | 20040824 | BR 2002-12107 | 20020822 |
| CN 1545411 | A | 20041110 | CN 2002-816441 | 20020822 |
| JP 2005501107 | T | 20050113 | JP 2003-522522 | 20020822 |
| PRIORITY APPLN. INFO.: | | | US 2001-314698P | P 20010823 |
| | | | WO 2002-EP9407 | W 20020822 |

OTHER SOURCE(S): MARPAT 138:221391

GI



AB The authors synthesized cis- and trans-12,13-cyclopropyl and 12,13-cyclobutyl epothilone analogs, e.g. I [R = 2-methyl-4-thiazolyl, 5-methyl-2-pyridyl, X = (CH₂)_n, n = 1,2], using aldol, Nozaki-Hiyama-Kishi coupling, and Yamaguchi macrolactonization reactions. Thus, the Nozaki-Hiyama-Kishi coupling reaction was used to attach the thiazolylpropenyl segment. These derivs. were tested for cytotoxicity against human ovarian carcinoma cell lines as well as human epidermoid cancer cell lines and β-tubulin mutant cell lines. The activity promoting tubulin polymerization was also examined. Trans-I (R = 5-methyl-2-pyridyl, X = CH₂) showed outstanding activity against all the cell lines, with IC₅₀ = 0.6 nM in the human ovarian carcinoma cell line. Some of the compds. display a similar cytotoxicity profile against the β-tubulin mutants compared to epothilone A.

L20 ANSWER 25 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:692341 HCPLUS Full-text

DOCUMENT NUMBER: 138:385696

TITLE: Peptidotriazoles: copper(I)-catalyzed 1,3-dipolar cycloadditions on solid-phase

AUTHOR(S): Tornoe, Christian W.; Meldal, Morten
CORPORATE SOURCE: Center for Solid Phase Organic Combinatorial Chemistry, Department of Chemistry, Carlsberg Laboratory, Valby, DK-2500, Den.

SOURCE: Peptides: The Wave of the Future, Proceedings of the Second International and the Seventeenth American Peptide Symposium, San Diego, CA, United States, June 9-14, 2001 (2001), 263-264. Editor(s): Lebl, Michal; Houghten, Richard A. American Peptide Society: San Diego, Calif.
CODEN: 69DBAL; ISBN: 0-9715560-0-8

DOCUMENT TYPE: Conference
LANGUAGE: English
AB A symposium report. Peptidotriazoles were prepared via Cu(I)-catalyzed 1,3-dipolar cycloaddn. reactions of HC.tplbond.CCO-FGFG-resin with azides.
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 26 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:640963 HCPLUS Full-text
DOCUMENT NUMBER: 137:353702
TITLE: EXPO3000-a new expandable polymer for synthesis and enzymatic assays

AUTHOR(S): Tornoe, Christian W.; Meldal, Morten
CORPORATE SOURCE: Department of Chemistry, Center for Solid Phase Organic Combinatorial Chemistry, Carlsberg Laboratory, Valby, DK-2500, Den.

SOURCE: Tetrahedron Letters (2002), 43(36), 6409-6411
CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A new polymer for synthesis and enzymic assays is presented which combines moderate loading with the biocompatibility of poly(ethylene glycol)-based resins. The polymer was prepared by copolymer of oxetane terminated polyethylene glycol and a silane having 4 benzyl oxetane groups. The polymer displays low swelling in all solvents until selective cleavage of a silyl based crosslinker expands the polar resin to render it penetratable for enzymes (an example with a 27 kDa protease is given). An efficient alkylation procedure for derivatization of long PEG-chains is also presented.
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 27 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:585469 HCPLUS Full-text
DOCUMENT NUMBER: 137:310727
TITLE: Chemical synthesis and biological evaluation of novel epothilone B and trans-12,13-cyclopropyl epothilone B analogues

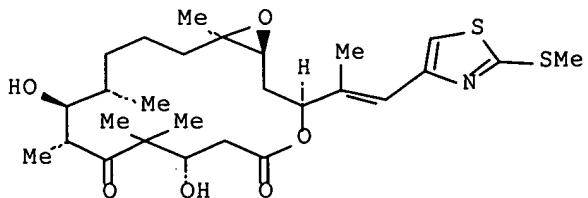
AUTHOR(S): Nicolaou, K. C.; Ritzen, Andreas; Namoto, Kenji; Buey, Ruben M.; Diaz, J. Fernando; Andreu, Jose M.; Wartmann, Markus; Altmann, Karl-Heinz; O'Brate, Aurora; Giannakakou, Paraskevi

CORPORATE SOURCE: Department of Chemistry and Skaggs Institute for Chemical Biology, Scripps Research Institute, La Jolla, CA, 92037, USA

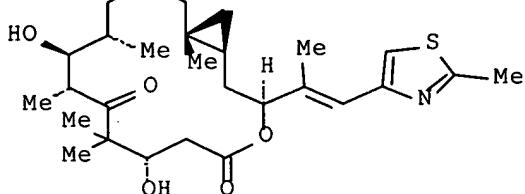
SOURCE: Tetrahedron (2002), 58(32), 6413-6432
CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal

LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:310727
GI



I



II

AB In addition to the total synthesis of the thiomethyl thiazole side chain analog of epothilone B I, a series of related trans-12,13-cyclopropyl epothilone B analogs, e.g. II, was accomplished. While the synthesis of the epothilone B analog I proceeded through a Stille coupling of a vinyl iodide substrate containing the epothilone macrocycle with the appropriate side chain stannane, that of the cyclopropyl analogs involved a convergent strategy in which a Nozaki-Hiyama-Kishi coupling was used as a means of introducing the side chains prior to Yamaguchi macrolactonization and final elaboration to the target mols. The synthesized analogs were subjected to biol. evaluation involving in vitro tubulin polymerization, affinity for the microtubule Taxol binding site and cell cytotoxicity assays. The results identified the methylthio thiazole side chain as a potency enhancing moiety for the epothilones and shed further light on the structure-activity relationships within this important class of chemotherapeutic agents.

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 28 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:418516 HCPLUS Full-text
DOCUMENT NUMBER: 137:139391
TITLE: Biotechnology and combinatorial chemistry
AUTHOR(S): Tornoe, Christian W.; Christensen, Caspar;
Meldal, Morten
CORPORATE SOURCE: SPOCC, Carlsberg Laboratorium, Den.
SOURCE: Dansk Kemi (2002), 83(5, Suppl.), 24-26
CODEN: DAKEAT; ISSN: 0011-6335
PUBLISHER: TechMedia
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Danish
AB A review.

L20 ANSWER 29 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:243712 HCPLUS Full-text
DOCUMENT NUMBER: 137:6388
TITLE: Peptidotriazoles on Solid Phase: [1,2,3]-Triazoles by

AUTHOR(S): Regiospecific Copper(I)-Catalyzed 1,3-Dipolar Cycloadditions of Terminal Alkynes to Azides
Tornoe, Christian W.; Christensen, Caspar;
Meldal, Morten

CORPORATE SOURCE: Center for Solid Phase Organic Combinatorial Chemistry
Department of Chemistry, Carlsberg Laboratory, Valby,
DK-2500, Den.

SOURCE: Journal of Organic Chemistry (2002), 67(9), 3057-3064
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 137:6388

AB The cycloaddn. of azides to alkynes is one of the most important synthetic routes to 1H-[1,2,3]-triazoles. This work reports a novel regiospecific copper(I)-catalyzed 1,3-dipolar cycloaddn. of terminal alkynes to azides on solid-phase. Primary, secondary, and tertiary alkyl azides, aryl azides, and an azido sugar were used successfully in the copper(I)-catalyzed cycloaddn. producing diversely 1,4-substituted [1,2,3]-triazoles in peptide backbones or side chains. The reaction conditions were fully compatible with solid-phase peptide synthesis on polar supports. The copper(I) catalysis is mild and efficient (>95% conversion and purity in most cases) and furthermore, the x-ray structure of 2-azido-2-methylpropanoic acid has been solved, to yield structural information on the 1,3-dipoles entering the reaction. Novel Fmoc-protected amino azides were prepared from Fmoc-amino alcs. by Mitsunobu reaction.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 30 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:627684 HCPLUS Full-text
DOCUMENT NUMBER: 135:344304

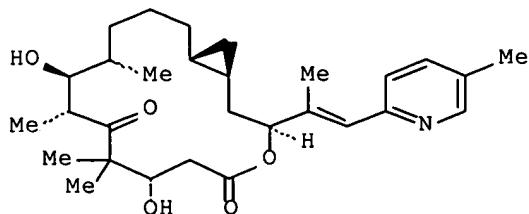
TITLE: Chemical synthesis and biological evaluation of cis- and trans-12,13-cyclopropyl and 12,13-cyclobutyl epothilones and related pyridine side chain analogues

AUTHOR(S): Nicolaou, K. C.; Namoto, Kenji; Ritzen, Andreas; Ulven, Trond; Shoji, Mitsuru; Li, Jim; D'Amico, Gina; Liotta, Dennis; French, Christopher T.; Wartmann, Markus; Altmann, Karl-Heinz; Giannakakou, Paraskevi

CORPORATE SOURCE: Department of Chemistry and The Skaggs Institute for Chemical Biology, The Scripps Research Institute, La Jolla, CA, 92037, USA

SOURCE: Journal of the American Chemical Society (2001), 123(38), 9313-9323
CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:344304
GI



I

AB The design, chemical synthesis, and biol. evaluation of a series of cyclopropyl and cyclobutyl epothilone analogs are described. The synthetic strategies toward these epothilones involved a Nozaki-Hiyama-Kishi coupling to form the C15-C16 carbon-carbon bond, an aldol reaction to construct the C6-C7 carbon-carbon bond, and a Yamaguchi macrolactonization to complete the required skeletal framework. Biol. studies with the synthesized compds. led to the identification of 6 epothilone analogs as potent tubulin polymerization promoters and cytotoxic agents with (12R,13S,15S)-cyclopropyl 5-methylpyridine epothilone A (I) as the most powerful compound whose potencies (e.g. IC₅₀ = 0.6 nM against the 1A9 ovarian carcinoma cell line) approach those of epothilone B. These investigations led to a number of important structure-activity relationships, including the conclusion that neither the epoxide nor the stereochem. at C12 are essential, while the stereochem. at both C13 and C15 are crucial for biol. activity. These studies also confirmed the importance of both the cyclopropyl and 5-methylpyridine moieties in conferring potent and potentially clin. useful biol. properties to the epothilone scaffold.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 31 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:603086 HCPLUS Full-text

DOCUMENT NUMBER: 136:47797

TITLE: Recent developments in the chemistry, biology and medicine of the epothilones

AUTHOR(S): Nicolaou, K. C.; Ritzen, Andreas; Namoto, Kenji

CORPORATE SOURCE: Department of Chemistry and The Skaggs Institute for Chemical Biology, The Scripps Research Institute, La Jolla, CA, 92037, USA

SOURCE: Chemical Communications (Cambridge, United Kingdom) (2001), (17), 1523-1535

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review. The epothilones have occupied center stage on the scenes of total synthesis, chemical biol. and medicine for the last five years, no doubt because of their intriguing mode of action and unusually high potency against tumor cells, including multidrug-resistant cell lines. This article reviews the most recent advances within this exciting field. Thus, an overview of recent synthetic endeavors culminating in a new generation of total syntheses and analogs, some with higher potencies than the naturally occurring substances, will be given, and the chemical biol., in particular the current understanding of structure-activity relationships of the epothilones, will also be discussed in light of the latest biol. results. In addition, the recently elucidated biosynthetic machinery of the natural epothilone-producing

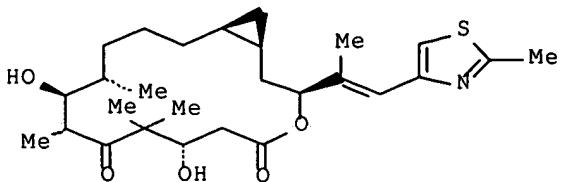
myxobacterium Sorangium cellulosum, as it is now understood, will be described. Finally, some preclin. and clin. studies will be summarized.

REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 32 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:537234 HCPLUS Full-text
DOCUMENT NUMBER: 135:318689
TITLE: Synthesis and conformational studies of a 1,1'-ferrocenophane lactam mimetic of substance P
AUTHOR(S): Maricic, Suzana; Ritzen, Andreas; Berg, Ulf; Frejd, Torbjörn
CORPORATE SOURCE: Department of Chemistry, Organic Chemistry 1, Centre for Chemistry and Chemical Engineering, Lund University, Lund, SE-22100, Swed.
SOURCE: Tetrahedron (2001), 57(30), 6523-6529
CODEN: TETRAB; ISSN: 0040-4020
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:318689
AB The synthesis of a bis-phenylalanine mimetic (I) and its incorporation into Substance P (SP), giving a conformationally constrained organometallic SP analog (II), is described. The lactam I was synthesized in five steps, via a Horner-Wadsworth-Emmons olefination reaction, enantioselective hydrogenation with [Rh(I)(COD)((S,S)Et-DuPHOS)]+OTf- and intramolecular cyclization with PyAOP as a coupling reagent. Comparative CD studies of II with native SP indicated that the flexibility around the amide bond of Phe(7)-Phe(8) sequence is crucial for the C-terminal (from residue Gln(4)) to adopt an α -helical conformation in the micellar environment created by SDS or in methanol.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 33 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:52914 HCPLUS Full-text
DOCUMENT NUMBER: 134:207638
TITLE: Synthesis and biological evaluation of 12,13-cyclopropyl and 12,13-cyclobutyl epothilones
AUTHOR(S): Nicolaou, K. C.; Namoto, Kenji; Li, Jim; Ritzen, Andreas; Ulven, Trond; Shoji, Mitsuru; Zaharevitz, Dan; Gussio, Rick; Sackett, Dan L.; Ward, Rita D.; Hensler, Anne; Fojo, Tito; Giannakakou, Paraskevi
CORPORATE SOURCE: Department of Chemistry and The Skaggs Institute for Chemical Biology, The Scripps Research Institute, La Jolla, CA, 92037, USA
SOURCE: ChemBioChem (2001), 2(1), 69-75
Published in: Angew. Chem., Int. Ed., 40(1)
CODEN: CBCHFX; ISSN: 1439-4227
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:207638
GI



AB The authors have constructed two 12,13-cyclopropyl (15S and 15R) and two 12,13-cyclobutyl (15S and 15R) epothilone analogs (e.g. I) by total synthesis and evaluated their biol. activities. While the 15S compds. exhibited potent tubulin polymerization activity and cytotoxicity against tumor cells, the 15R isomers were devoid of such actions. This re-enhanced the view that while the oxygen atom at the C12-C13 site is not necessary for biol. activity, the proper configuration at C15 is absolutely essential for it.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 34 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:30050 HCPLUS Full-text

DOCUMENT NUMBER: 134:222998

TITLE: α -Azido acids for direct use in solid-phase peptide synthesis

AUTHOR(S): Tornoe, Christian W.; Davis, Peg; Porreca, Frank; Meldal, Morten

CORPORATE SOURCE: Department of Chemistry, Carlsberg Laboratory, Copenhagen, DK-2500, Den.

SOURCE: Journal of Peptide Science (2000), 6(12), 594-602
CODEN: JPSIEI; ISSN: 1075-2617

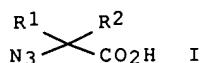
PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:222998

GI



AB Several new α -azido acids, e. g., I [R1, R2 = Me; R1 = Me, R2 = Et; R1, R2 = Et; R1, R2 = Ph; R1 = H, R2 = (CH2)13Me, etc.] have been synthesized and their use in solid-phase peptide synthesis has been demonstrated. The azido group allows for high activation of the carboxyl group as an acid chloride without formation of byproducts and with no detectable racemization. An analog of Leu-enkephalin has been prepared and tested in the mouse vas deferens and guinea pig ileum bioassays: it displays moderate activity at the δ -opioid receptor.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 35 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:845884 HCPLUS Full-text

DOCUMENT NUMBER: 134:147962

TITLE: Chiral, polyionic dendrimers with complementary

AUTHOR(S): charges - synthesis and chiroptical properties
Ritzen, Andreas; Frejd, Torbjorn
CORPORATE SOURCE: Organic Chemistry 1, Department of Chemistry, Lund
University, Lund, 22100, Swed.
SOURCE: European Journal of Organic Chemistry (2000), (22),
3771-3782
CODEN: EJOCFK; ISSN: 1434-193X
PUBLISHER: Wiley-VCH Verlag GmbH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Chiral dendrimers up to the second generation have been prepared from enantiopure aromatic bis- and tris(amino acids) by peptide coupling techniques. The dendrimers could be deprotected to yield water-soluble polyamine and/or polycarboxylic acid macromols. Two complementary types, with respect to the charges carried in water at pH = 7, were synthesized. A chiroptical study of the protected dendrimers, which were soluble in THF and CHCl₃, was conducted. The results of that study indicate that the solution shapes of these dendrimers are rather decongested, with little steric interaction between different parts of the dendritic structure.
REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 36 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:780078 HCPLUS Full-text
DOCUMENT NUMBER: 135:273193
TITLE: Solid-phase synthesis of chemotactic peptides using α -azido acids. [Erratum to document cited in CA133:267143]
AUTHOR(S): Tornoe, Christian W.; Sengelov, Henrik;
Meidal, Morten
CORPORATE SOURCE: Department of Chemistry, Carlsberg Laboratory,
Copenhagen, DK-2500, Den.
SOURCE: Journal of Peptide Science (2000), 6(10), 539
CODEN: JPSIEI; ISSN: 1075-2617
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The corrected Table 1 is given.

L20 ANSWER 37 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:557699 HCPLUS Full-text
DOCUMENT NUMBER: 133:267143
TITLE: Solid-phase synthesis of chemotactic peptides using α -azido acids
AUTHOR(S): Tornoe, Christian W.; Sengelov, Henrik;
Meldal, Morten
CORPORATE SOURCE: Department of Chemistry, Carlsberg Laboratory,
Copenhagen, DK-2500, Den.
SOURCE: Journal of Peptide Science (2000), 6(7), 314-320
CODEN: JPSIEI; ISSN: 1075-2617
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 133:267143
AB Four chemotactic peptides, For-Met-Xxx-Phe-OMe (Xxx = Aib, Deg, Dpg, or Dph, where Aib = 2-aminoisobutyric acid, Deg = diethylglycine, Dpg = dipropylglycine, Dph = diphenylglycine) with an α,α - disubstituted amino acid at position 2 have been synthesized by the azido acid method on solid-phase,

and were tested for biol. activity. Dpg in the central position was found to be as active as the natural chemotactic peptide for chemotactic activity toward human neutrophils. Higher yields were obtained than previously reported solution-phase syntheses of chemotactic peptides, and EEDQ (2-ethoxy-1-ethoxycarbonyl-1,2-dihydroquinoline) was used successfully for the difficult solid-phase formylation of amino groups.

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 38 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2000:401811 HCPLUS Full-text
 DOCUMENT NUMBER: 133:43427
 TITLE: Preparation of benzofurans as 5-HT1A receptor ligands
 INVENTOR(S): Andersen, Kim; Rottlander, Mario; Bogeso, Klaus Peter; Pedersen, Henrik; Ruhland, Thomas; Dancer, Robert
 PATENT ASSIGNEE(S): H. Lundbeck A/S, Den.
 SOURCE: PCT Int. Appl., 64 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-------------------|------------|
| WO 2000034263 | A1 | 20000615 | WO 1999-DK676 | 19991203 |
| W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW | | | | |
| RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| CA 2353618 | A1 | 20000615 | CA 1999-2353618 | 19991203 |
| BR 9916873 | A | 20010821 | BR 1999-16873 | 19991203 |
| EP 1137644 | A1 | 20011004 | EP 1999-957263 | 19991203 |
| EP 1137644 | B1 | 20030910 | | |
| R: AT, BE, CH, DE, DK, ES, FR, IE, SI, LT, LV, FI, RO | | | | |
| TR 200101605 | T2 | 20011022 | TR 2001-200101605 | 19991203 |
| HU 200104510 | A2 | 20020429 | HU 2001-4510 | 19991203 |
| JP 2002531556 | T | 20020924 | JP 2000-586710 | 19991203 |
| AU 759248 | B2 | 20030410 | AU 2000-15036 | 19991203 |
| AT 249451 | T | 20030915 | AT 1999-957263 | 19991203 |
| NZ 511751 | A | 20030926 | NZ 1999-511751 | 19991203 |
| PT 1137644 | T | 20040130 | PT 1999-957263 | 19991203 |
| ES 2204175 | T3 | 20040416 | ES 1999-957263 | 19991203 |
| IL 143082 | A | 20040620 | IL 1999-143082 | 19991203 |
| ZA 2001003987 | A | 20020516 | ZA 2001-3987 | 20010516 |
| HR 2001000418 | A1 | 20020630 | HR 2001-418 | 20010601 |
| IN 2001CN00769 | A | 20050304 | IN 2001-CN769 | 20010601 |
| US 2002032205 | A1 | 20020314 | US 2001-874392 | 20010604 |
| NO 2001002802 | A | 20010807 | NO 2001-2802 | 20010607 |
| BG 105646 | A | 20020228 | BG 2001-105646 | 20010625 |
| HK 1043121 | A1 | 20051216 | HK 2002-104563 | 20020619 |
| PRIORITY APPLN. INFO.: | | | US 1998-111360P | P 19981208 |
| | | | DK 1998-1631 | A 19981209 |
| | | | WO 1999-DK676 | W 19991203 |

OTHER SOURCE(S):
GI

MARPAT 133:43427

US 2000-632117 A 20000803
WO 2001-US23487 A 20010726

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. [I; R1 = H, halo, CF₃, etc.; R2, R3 = H, CF₃, alkyl, etc.; n = 1-5; m = 0-1; A = N(R₄)D_sZq, II-IV (wherein Z = O, S; s = 0-1; q = 0-1; R₄ = H, alkyl, alkenyl, etc.; D = alkylene, alkenylene, alkynylene); B = (un)substituted Ph, indolyl, etc.; Ar = (un)substituted Ph, thieryl, furanyl, etc.] and their pharmaceutically acceptable acid addition salts which are potently binding to the 5-HT_{1A} receptor, were prepared Thus, reacting 5-(4-bromobutyl)-1,4-benzodioxane (preparation given) with (+)-1-[3-(methylamino)propyl]-1-(4-fluorophenyl)-1,3-dihydroisobenzofuran-5-carbonitrile in the presence of K₂CO₃ in Me iso-Bu ketone afforded 73% (+)-V which showed IC₅₀ of 39 nM against 3H-5-CT binding and IC₅₀ of 60 nM against serotonin reuptake.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 39 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:290435 HCPLUS Full-text
DOCUMENT NUMBER: 133:73775
TITLE: Enzymic and chiral HPLC resolution of α -azido acids and amides
AUTHOR(S): Tornoe, Christian W.; Sonke, Theo; Maes, Ilse; Schoemaker, Hans E.; Meldal, Morten
CORPORATE SOURCE: Carlsberg Laboratory, Department of Chemistry, Valby, DK-2500, Den.
SOURCE: Tetrahedron: Asymmetry (2000), 11(5), 1239-1248
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB For the first time, enzymic resolution of α -azido acid amides has been successfully demonstrated with high yields and enantiomeric excess. In one case dynamic kinetic resolution was achieved leading to >50% yield of the enantiomerically pure azido acid. Chiral HPLC was also used to sep. racemic α -azido acids, and the separation process was automated. Two routes to enantiopure α -azido acid building blocks for solid-phase peptide synthesis have, therefore, been established.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 40 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2000:186196 HCPLUS Full-text
DOCUMENT NUMBER: 132:321523
TITLE: New polyfunctional magnesium reagents for organic synthesis
AUTHOR(S): Rottlander, Mario; Boymond, Laure; Berillon, Laurent; Lepretre, Anne; Varchi, Greta; Avolio, Salvatore; Laaziri, Hamid; Queguiner, Guy; Ricci, Alfredo; Cahiez, Gerard; Knochel, Paul
CORPORATE SOURCE: Institut fur Organische Chemie der Universitat, Munchen, 81377, Germany

SOURCE: Chemistry--A European Journal (2000), 6(5), 767-770
 CODEN: CEUJED; ISSN: 0947-6539
 PUBLISHER: Wiley-VCH Verlag GmbH
 DOCUMENT TYPE: Journal; General Review
 LANGUAGE: English
 AB A review with 20 refs. The iodine-magnesium exchange reaction allows the preparation of polyfunctional aryl, heteroaryl, or alkenyl magnesium reagents at low temperature. These reagents display the typical reactivity of Grignard compds. and undergo various copper-catalyzed reactions such as allylation or 1,4-addition. Using this halogen-metal exchange reaction, it was possible to generate polyfunctional magnesium reagents on the solid phase.
 REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 41 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 2000:44865 HCPLUS Full-text
 DOCUMENT NUMBER: 132:265469
 TITLE: Azido acids in a novel method of solid phase synthesis
 AUTHOR(S): Meldal, Morten; Tornoe, Christian; Tedebark, Ulf; Jansson, Anita M.; Juliano, Maria A.; Panza, Luigi; Lay, Luigi
 CORPORATE SOURCE: Carlsberg Laboratory, Valby, DK-2500, Den.
 SOURCE: Innovation and Perspectives in Solid Phase Synthesis & Combinatorial Libraries: Peptides, Proteins and Nucleic Acids--Small Molecule Organic Chemical Diversity, Collected Papers, International Symposium, 5th, London, Sept. 2-6, 1997 (1999), Meeting Date 1997, 19-22. Editor(s): Epton, Roger. Mayflower Scientific Ltd.: Kingswinford, UK.
 CODEN: 68OEAA
 DOCUMENT TYPE: Conference
 LANGUAGE: English
 AB A symposium on the authors' work using α -azido amino acids as versatile reagents for solid phase peptide synthesis.
 REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 42 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1999:659392 HCPLUS Full-text
 DOCUMENT NUMBER: 131:257694
 TITLE: Method for the production of Grignard reagents
 INVENTOR(S): Boymond, Laure; Rottlander, Mario; Cahiez, Gerard; Knochel, Paul
 PATENT ASSIGNEE(S): BASF A.-G., Germany
 SOURCE: PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|------------------|----------|
| WO 9951609 | A1 | 19991014 | WO 1999-EP2275 | 19990401 |
| W: CA, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| DE 19815078 | A1 | 19991007 | DE 1998-19815078 | 19980406 |
| DE 19816414 | A1 | 19991021 | DE 1998-19816414 | 19980414 |
| DE 19836408 | A1 | 20000224 | DE 1998-19836408 | 19980812 |

| | | | | |
|---|----|----------|------------------|------------|
| CA 2326751 | A1 | 19991014 | CA 1999-2326751 | 19990401 |
| EP 1070070 | A1 | 20010124 | EP 1999-914565 | 19990401 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, IE | | | | |
| JP 2003517433 | T | 20030527 | JP 2000-542330 | 19990401 |
| US 6899830 | B1 | 20050531 | US 2000-647069 | 19990401 |
| PRIORITY APPLN. INFO.: | | | DE 1998-19815078 | A 19980406 |
| | | | DE 1998-19816414 | A 19980414 |
| | | | DE 1998-19836408 | A 19980812 |
| | | | WO 1999-EP2275 | W 19990401 |

OTHER SOURCE(S): MARPAT 131:257694

AB Grignard reactions of IC₆H₄R (R = p-Me₃CO₂C, p-, m-NC, p-EtO₂C, p-Br) with BzH gave 89-94% PhCH(OH)C₆H₄R. Similarly, IC₆H₄R (R = p-piperidinocarbonyl, p-, o-NC, o-, p-Br) and allyl bromide gave 75-89% H₂C:CHCH₂C₆H₄R. Grignard reactions were also carried out supported on Wang resin to give 11 products such as p-RC₆H₄CO₂H (R = allyl, PHCH(OH), NC, PhS), 5-allylthiophene-2-carboxylic acid, 5-cyanofuran-2-carboxylic acid, etc.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 43 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:45319 HCPLUS Full-text

DOCUMENT NUMBER: 130:252737

TITLE: Synthesis of a chiral dendrimer based on polyfunctional amino acids

AUTHOR(S): Ritzen, Andreas; Frejd, Torbjorn

CORPORATE SOURCE: Department of Chemistry, Organic Chemistry 1, Lund University, Lund, 221 00, Swed.

SOURCE: Chemical Communications (Cambridge) (1999), (2), 207-208

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A chiral, nonracemic dendrimer of generation two based on nine units of an aromatic bis-amino acid and one unit of protected tris-alanine was obtained through convergent synthesis.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 44 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:773073 HCPLUS Full-text

DOCUMENT NUMBER: 130:95806

TITLE: Phenyltrisalanine: a new, C₃-symmetric, trifunctional amino acid

AUTHOR(S): Ritzen, Andreas; Basu, Basudeb; Wallberg, Andreas; Frejd, Torbjorn

CORPORATE SOURCE: Organic Chemistry 1, Department of Chemistry, Lund University, Lund, SE-221 00, Swed.

SOURCE: Tetrahedron: Asymmetry (1998), 9(19), 3491-3496

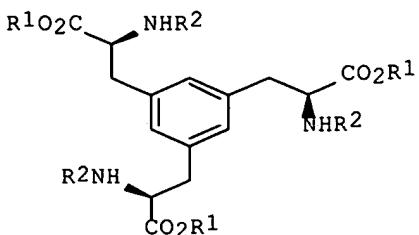
CODEN: TASYE3; ISSN: 0957-4166

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB Two phenyltrisalanine derivs. I (R1 = Me, R2 = Cbz; R1 = CH2Ph, R2 = Boc), new trifunctional amino acids, were synthesized in optically active forms. Two complementary techniques, Horner-Wadsworth-Emmons olefination reaction or Heck coupling reaction, were employed, and the resulting dehydroamino acids were hydrogenated using a chiral Rh(I)-Et-DuPHOS catalyst. Phenyltrisalanine derivs. I were obtained with excellent stereoisomeric purity.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 45 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:631200 HCPLUS Full-text

DOCUMENT NUMBER: 130:81825

TITLE: Cyclization of meta-phenylene-bis-alanine derivatives

AUTHOR(S): Ritzen, Andreas; Frejd, Torbjorn

CORPORATE SOURCE: Department of Chemistry, Organic Chemistry 1, Lund University, Lund, SE-221 00, Swed.

SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1998), (20), 3419-3424

CODEN: JCPRB4; ISSN: 0300-922X

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 130:81825

AB The cyclization of a meta-phenylene-bis-alanine derivative with several different spacer moieties was investigated. A large difference in the ease of cyclization was observed depending on which path of cyclization was chosen. NMR studies indicate that the closed-loop mols. adopt folded conformations with the loop directly above the aromatic ring plane.

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 46 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:467767 HCPLUS Full-text

DOCUMENT NUMBER: 129:202524

TITLE: Preparation of highly functionalized Grignard reagents by an iodine-magnesium exchange reaction and its application in solid-phase synthesis

AUTHOR(S): Boymond, Laure; Rottlander, Mario; Cahiez, Gerard; Knochel, Paul

CORPORATE SOURCE: Fachbereich Chemie Universitat, Marburg, D-35032, Germany

SOURCE: Angewandte Chemie, International Edition (1998), 37(12), 1701-1703

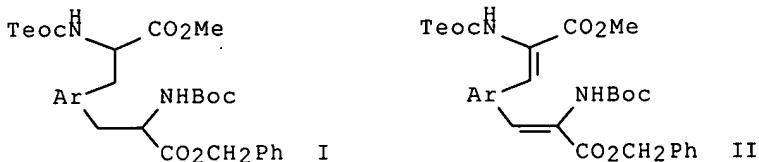
CODEN: ACIEF5; ISSN: 1433-7851

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English
 OTHER SOURCE(S): CASREACT 129:202524
 AB Grignard reagents were prepared via iodine-magnesium exchange and the use of the reagents thus obtained was reported. Wang resin was charged with 4-iodobenzoic acid and the mixture was subsequently treated with isopropylmagnesium bromide to give a Grignard reagent. Quenching of the latter with tosyl cyanide gave 4-cyanobenzoic acid, following removal of the resin support.
 REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 47 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1998:171987 HCPLUS Full-text
 DOCUMENT NUMBER: 128:244304
 TITLE: Synthesis of optically active arylene bis-alanine derivatives carrying orthogonal protecting groups
 AUTHOR(S): Ritzen, Andreas; Basu, Basudeb; Chattopadhyay, Shital K.; Dossa, Fahreen; Frejd, Torbjorn
 CORPORATE SOURCE: Department of Chemistry, Organic Chemistry 1, Lund University, Lund, SE-221 00, Swed.
 SOURCE: Tetrahedron: Asymmetry (1998), 9(3), 503-512
 CODEN: TASYE3; ISSN: 0957-4166
 PUBLISHER: Elsevier Science Ltd.
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 128:244304
 GI



AB Derivs. of p- and m-phenylene bis-alanine and related biphenyl systems I [Ar = p-C₆H₄, m-C₆H₄, p,p'-(C₆H₄)₂; Teoc = Me₃SICH₂CH₂O₂C; Boc = Me₃CO₂C], carrying four orthogonal protecting groups, were synthesized via combinations of Heck couplings of haloarenes and dehydroalanine derivs. followed by asym. hydrogenations. The intermediate unsatd. arylalanine derivs. II were hydrogenated using [Rh(COD) ((R,R)-DIPAMP)]+BF₄- or [Rh(COD) (Me-DuPHOS)]+X- as catalysts to produce the optically active, protected amino acid derivs. in ≥98% e.e. as analyzed by chiral phase HPLC.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 48 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 1997:643210 HCPLUS Full-text
 DOCUMENT NUMBER: 127:358692
 TITLE: Multiple cross-coupling reactions of aryl and benzylic zinc halides with aryl halides and triflates in solid-phase synthesis of polyfunctional aromatics
 AUTHOR(S): Rottlander, Mario; Knochel, Paul
 CORPORATE SOURCE: Fachbereich Chemie, Philipps-Universitat, Marburg,

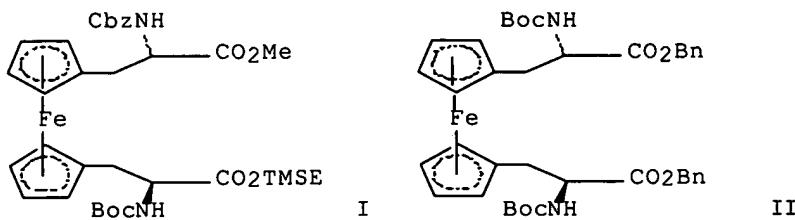
SOURCE: D-35032, Germany
Synlett (1997), (9), 1084-1086
CODEN: SYNLES; ISSN: 0936-5214

PUBLISHER: Thieme
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:358692

AB Aryl and benzylic zinc bromides undergo efficient Pd(0)-catalyzed cross-coupling reactions on the solid-phase using either Rink or Wang resin. By performing the cross-couplings with the multi-coupling reagents 4-BrZnCH₂C₆H₄O₂CCF₃ and 4-BrZnC₆H₄OSi(CH₃)₃, two successive C-C bond forming reactions are possible on the solid-phase.

L20 ANSWER 49 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:480607 HCAPLUS Full-text
DOCUMENT NUMBER: 127:161856
TITLE: New coupling reactions and phosphorylations using organozinc reagents
AUTHOR(S): Knochel, Paul; Langer, Falk; Longeau, Alexia;
Rottlander, Mario; Studemann, Thomas
CORPORATE SOURCE: Fachbereich Chemie, Philipps-Universitat, Marburg,
D-35032, Germany
SOURCE: Chemische Berichte/Recueil (1997), 130(8), 1021-1027
CODEN: CHBRFW
PUBLISHER: Wiley-VCH
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 42 refs. This microreview on the chemical of organozinc reagents starts by briefly showing the methods of preparation of organozinc compds. and then discusses the considerable synthetic utility of zinc organometallics for the formation of new carbon-carbon bonds in the presence of transition-metal catalysts. Finally, the use of organozinc chemical for the preparation of polyfunctional and chiral phosphines is described.

L20 ANSWER 50 OF 52 HCAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:419565 HCAPLUS Full-text
DOCUMENT NUMBER: 127:176531
TITLE: Synthesis of optically active 1,1'-ferrocenylenebis(alanine) carrying four different protecting groups
AUTHOR(S): Basu, Basudeb; Chattopadhyay, Shital K.; Ritzen, Andreas; Frejd, Torbjorn
CORPORATE SOURCE: Division of Organic Chemistry 1, Department of Chemistry, Lund University, Lund, S-221 00, Swed.
SOURCE: Tetrahedron: Asymmetry (1997), 8(11), 1841-1846
CODEN: TASYE3; ISSN: 0957-4166
PUBLISHER: Elsevier
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 127:176531
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AB The bis-amino acid derivs. (+)-6 and (+)-8 (shown as I and II, resp. where TMSE = 2-trimethylsilyl ethyl and Bn = benzyl) were synthesized (>95% ee) as mixts. with the corresponding diastereomers (dr:s 80:20 and 90:10, resp.) via asym. hydrogenation of the corresponding bis(didehydroamino acid) derivs. using [Rh((R,R)-DIPAMP)(COD)]BF₄ (DIPAMP = 1,2-bis[(o-methoxyphenyl)phenylphosphino]ethane) as catalyst.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 51 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:424819 HCPLUS Full-text

DOCUMENT NUMBER: 119:24819

TITLE: Acetylcholine receptor molecules of the nematode *Caenorhabditis elegans*

AUTHOR(S): Fleming, J. T.; Tornoe, C.; Riina, H. A.; Coadwell, J.; Lewis, J. A.; Sattelle, D. B.

CORPORATE SOURCE: Lab. Mol. Signalling, AFRC, Cambridge, CB2 3EJ, UK

SOURCE: EXS (1993), 63(Comparative Molecular Neurobiology), 65-80

CODEN: EXSEE7; ISSN: 1023-294X

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review, with 49 refs. Studies using physiol. and biochem. methods have revealed the existence of nicotinic acetylcholine receptors with a novel pharmacol. *C. elegans* provides a particularly suitable organism with which to investigate such receptors using mol. genetic approaches.

L20 ANSWER 52 OF 52 HCPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:404456 HCPLUS Full-text

DOCUMENT NUMBER: 109:4456

TITLE: Lipoprotein-bound bile acids in serum from healthy men, postprandially and during fasting

AUTHOR(S): Hedenborg, G.; Norman, A.; Ritzen, A.

CORPORATE SOURCE: Dep. Clin. Chem., Karolinska Sjukhuset, Stockholm, 104 01, Swed.

SOURCE: Scandinavian Journal of Clinical and Laboratory Investigation (1988), 48(3), 241-5

CODEN: SJCLAY; ISSN: 0036-5513

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Individual bile acids were determined by gas-liquid chromatog. in very-low-d., low-d., and hi-d. lipoprotein fractions obtained by sequential ultracentrifugation of serum from normal adults, both postprandially and during fasting (for ≥12 h). The lipoproteins contained 22-34% of fasting serum bile acids. The observed postprandial increase in bile acids did not exhibit any shift in the ratio between lipoprotein-bound- and non-lipoprotein-bound bile acids. Bile acids were present in all isolated lipoprotein

fractions, with high-d. lipoproteins containing the highest amts. In the lipoprotein fraction, a higher percentage of cholate than of chenodeoxycholate was found.

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